Ettevõtlus-ja infotehnoloogiaministri
26.10.2017. a määrus nr 54
„Eesti raadiosagedusplaan“
Lisa 2
(muudetud sõnastuses)

EESTI RAADIOSAGEDUSPLAANIS KASUTATUD TÄHISTE JA LÜHENDITE SELGITUSED

I. Raadiosagedusplaanis kasutatud tähiste ja lühendite selgitused

Lühend	Tähendus
ACAS	Kokkupõrke vältimise süsteem *(Automatic Collision Avoidance system)*
ADS-B	Automaatne sõltuv seire *(Automatic Dependent Surveillance-Broadcast)*
AGA	Õhk-Maa-Õhk side *(Air-Ground-Air operation)*
AES	Õhusõiduki pardale paigaldatav kosmoseside maajaam (Aircraft Earth Station)
AIS	Universaalne laevade identifitseerimissüsteem *(Automatic Identification and Surveillance system)*
AM	Amplituudmodulatsioon (*Amplitude modulation*)
App.	Raadioeeskirjade lisa (*Appendix*)
Art.	Raadioeeskirjade artikkel (*Article*)
AVI	Raudteeveeremi automaatne identifitseerimissüsteem *(Automatic Vehicle Identification for Railways)*
BSS	Ringhääling (satelliit) (*Broadcasting-satellite service*)
BWA	Lairiba juurdepääsu raadiovõrk *(Broadband Wireless Access)*
CEPT	Euroopa Postside- ja Telekommunikatsiooni Administratsioonide Konverents (*European Conference of Postal and Telecommunications Administrations*)
CEPT PR27	Ühiskasutusega sagedusalas 27 MHz töötav raadiosidesüsteem (*Citizen's band radio equipment in the 27 MHz band*)
CEPT/ECC/REC **CEPT/ERC/REC** **CEPT/ERC/ T/R**	CEPT Elektroonilise Side Komitee soovitus
CEPT/ECC/DEC **CEPT/ERC/DEC**	CEPT Elektroonilise Side Komitee otsus
DEC	Otsus (*Decision*)
DECT	Raadiotelefonisüsteem (*Digital Enhanced Cordless Telecommunications*)
DGPS	Diferentsiaalne sidesüsteem asukoha määramiseks (*Differential Global Positioning System*)
DME	Vahemaa mõõtmise süsteem *(Distance measuring equipment)*
DMO	Otseühenduskanal *(Direct Mode Operation)*

DPMR 446	Ühiskasutusega sagedusalas 446 MHz töötav digitaalne raadiosidesüsteem (*Digital Professional Mobile Radio 446*)
Du	Dupleks raadiosageduskanal
DVB-T	Maapealne digitaaltelevisioon (*Terrestrial Digital Video Broadcasting*)
e.i.r.p.	Ekvivalentne isotroopne kiirgusvõimsus (*Equivalent isotropically radiated power*)
EN	Euroopa standard
EPIRB	Avariipoid (*Emergency Position-Indicating Radiobeacon*)
ERMES	Üldkasutatav isikuotsingu süsteem (*European Radio Message System*)
ESIM/ESOMP	Satelliitside terminal liikuval platvormil (*Earth Stations In-Motion / Earth Stations on Mobile Platforms*)
ES	Kosmoseside maajaama saatesagedus (*Earth-to- space*)
ESV	Veesõiduki pardale paigaldatav kosmoseside maajaam (Earth Station on board Vessels)
ETSI	Euroopa Telekommunikatsiooni Standardite Instituut *(European Telecommunications Standards Institute)*
EUROCAE	Euroopa Tsiviillennunduse Seadmete Organisatsioon *(European Organization for Civil Aviation Equipment)*
FDD	Sagedustihendus dupleks *(Frequency Division Duplex)*
FM	Sagedusmodulatsioon (*Frequency modulation*)
FSS	Paikne kosmoseside (*Fixed-satellite service*)
FWS	Paikne traadita süsteem *(Fixed Wireless System)*
GBSAR	Ehitise ja pinnase struktuuri sondeerimisseade (*Ground Based Synthetic Aperture Radar*)
GMDSS	Ülemaailmne merehäda ja ohutuse süsteem *(Global Maritime Distress and Safety System)*
GPS	Kosmosesidesüsteem asukoha määramiseks (*Global Positioning System*)
GPR	Pinnase sondeerimisradar *(Ground Probing Radar)*
GSM	Mobiiltelefonisüsteem (*Global System for Mobile Communication*)
E-GSM	GSM-laiendus
GSM-R	Raudtee mobiiltelefonisüsteem (*GSM-Railway*)
GSO	Geostatsionaarne orbiit *(Geostationary orbit)*
HDFS	Suuremahuline paikse side rakendus (*High-Density Fixed Service*)
HDFSS	Kosmoseside juurdepääsu rakendus (*High-density fixed satellite service*)
HDTV	Kõrgkvaliteediline televisioon *(High Definition Television)*
HF	Kõrgsagedus 3–30 MHz *(High Frequency)*
Hz	Hertz, sageduse mõõtühik (1 kHz = 1000 Hz; 1 MHz = 1 000 000 Hz; 1 GHz = 1 000 000 000 Hz)
ICAO	Rahvusvahelise Tsiviillennunduse Organisatsioon *(International Civil Aviation Organization)*
ILS	Pimemaandumissüsteem *(Instrument Landing System)*
IMT	Rahvusvaheline mobiilside (*International Mobile Telecommunications*)
IMO	Rahvusvaheline Mereorganisatsioon (*International Maritime Organization*)

ITU	Rahvusvaheline Telekommunikatsiooni Liit (*International Telecommunication Union*)
ITU-R F.XXX	Rahvusvahelise Telekommunikatsiooni Liidu Raadioside sektori (*International Telecommunication Union Radiocommunication Sector*) soovitus
JTIDS/MIDS	Taktikalise ja mitmefunktsionaalse informatsiooni edastussüsteem *(Joint Tactical Information Distribution System / Multifunctional Information Distribution System)*
MCA	Mobiilside teenused õhusõiduki pardal *(Mobile Communications on Board Aircraft)*
MCV	Mobiilside teenused veesõiduki pardal *(Mobile Communications on Board Aircraft)Mobile Communication Services on Board Vessels*
MFCN	Maapealne elektroonilise sideteenuse osutamise süsteem (*Mobile/Fixed Communications Networks*)
MLS	MLS maandumissüsteem (*Microwave Landing System)*
MSI	Mere-ohutusinformatsioon (*Maritime Safety Information*)
MWS	Juhtmeta multimeediajaotussüsteem (*Multimedia Wireless Systems*)
NAVDAT	Meresõiduohutuse süsteem *(Navigational data)*
NAVTEX	Meresõiduohutuse süsteem (*Navigational telex*)
NGSO	Mitte-geostatsionaarne orbiit *(Non-Geostationary orbit)*
NBDP	Kitsaribaline tähttrükkimine (*Narrow-Band Direct-Printing*)
5G NPN	Viienda põlvkonna mobiilsidestandardile vastav privaatne lairiba võrk *(5G Non-Public Network)* Sageduste kasutusviis, mille korral piiratakse sageduste kasutamist ühe kinnistu territooriumiga ja mille puhul ei osutata üldkasutatavat elektroonilise side teenust.
OR	Lennuside väljaspool lennutrasse (*Off- Route*)
PFD	Võimsusvootihedus (*Power flux density*)
PMR446	Ühiskasutusega sagedusalas 446 MHz töötav raadiosidesüsteem (*Professional Mobile Radio 446*)
PMR/PAMR	Ametkondlik liikuv raadiosidesüsteem/piiratud avaliku juurdepääsuga liikuv raadiosidesüsteem *(Professional Mobile Radio/Public Access Mobile Radio)*
PMSE	Programmitootmise ja erisündmuste edastamise *(Programme-making and Special Events)*
R	Lennuside lennutrassidel (*Route*)
Rec.	Soovitus (*Recommendation*)
Res.	Resolutsioon (*Resolution*)
RTTT	Maanteesidesüsteem (*Road Transport and Traffic Telematics*)
Rx	Baasjaama vastuvõtusagedus
RR	Raadioeeskirjad *(Radio Regulations)*
SART	Radarivastajasüsteem (*Search and Rescue Transponders*)
S-DAB	Kosmose digitaalraadioringhääling (*Satellite Digital Audio Broadcasting*)
SE	Kosmoseside maajaama vastuvõtusagedus (*Space-to-Earth*)
Si	Simpleks raadiosageduskanal
SIT	SIT terminal *(Satellite Interactive Terminal)*
SNG	Kosmosesidesüsteem uudiste ajutiseks edastamiseks (*Satellite News Gathering*)
SRD	Lähitoimeseadmed *(Short Range Device)*

SS	Satelliitidevaheline side (*Satellite-to-satellite*)
SSB	Ühe külgriba modulatsioon (*Single Side Band*)
S-PCS	Isikliku kasutusega kosmosesidesüsteem (*Satellite Personal Communications Services*)
SUT	SUT terminal *(Satellite User Terminal)*
T-DAB	Maapealne digitaalraadioringhääling (*Terrestrial Digital Audio Broadcasting*)
TDD	Aegtihendus dupleks *(Time Division Duplex)*
TLPR	Mahutite taseme sondeerimisseade (*Tanks Level Probing Radar*)
ISM (TTM)	Eriotstarbelised raadiosagedusseadmed – tööstuses, teaduses, meditsiinis (*Industrial, Scientific and Medical applications*), olmes või muus valdkonnas kasutamiseks ettenähtud seadmed, mille töö põhineb elektromagnetlainete kasutamisel muul eesmärgil, kui raadioside pidamine
TV	Televisioon
Tx	Baasjaama saatesagedus
UAS	Mehitamata õhusõidukite süsteemid *(Unmanned Aircraft Systems)*
UMTS	Kolmanda põlvkonna mobiiltelefonivõrk (*Universal Mobile Telecommunications System*)
VHF	Ülikõrgsagedus 30–300 MHz *(Very High Frequency)*
VOR	VHF-ringsuunaline raadiomajakas *(VHF omnidirectional radio range)*
VSAT	Väikesemõõtmelised satelliitsidesüsteemide rakendused (*Very Small Aperture Terminal*)
WAS/RLAN	Lairiba andmeedastussüsteem / raadio koht-võrk (*Wireless Access Systems including Radio Local Area Networks)*
WPR	Seina sondeerimisradar *(Wall Probing Radar)*
WRC (WARC)	Ülemaailmne raadioside konverents (*World (Administrative) Radio Conference*)

II. Määrused

Raadiosagedusplaan ESS § 9 lg 3 alusel	Eesti raadiosagedusplaan
Raadioside liides ESS § 120² lg 2 alusel	Tehnilised nõuded sagedusloa alusel kasutatavatele raadioseadmetele
Raadioliides ESS § 20 lg 1 alusel	Raadiosageduste kasutamise tingimused ja tehnilised nõuded sagedusloast vabastatud raadioseadmetele
Kord ESS § 24 alusel	Raadioamatöörile kvalifikatsiooni andmise ja raadiosageduste amatöörraadioside otstarbel kasutamise kord
Kord ja nõuded ESS § 21 lg 1 alusel	Kaitseväe ainukasutuseks määratud raadiosageduste kasutamise kord ja tehnilised nõuded
Nõuded multipleksimisteenusele ESS § 90¹ lg 3 alusel	Nõuded vaba juurdepääsuga ja tingimusjuurdepääsuga teleprogrammide edastamisele ning taasedastamisele
Konkursi kord ESS § 9 lg 4 alusel	Avaliku konkursi läbiviimise kord

III. CEPT elektroonilise side komitee soovitused

CEPT/ERC/REC/(00)04	Harmonised frequencies and free circulation and use for Meteor Scatter Applications
CEPT/ERC/REC/(01)02	Preferred channel arangement for fixed service systems operating in the frequency band 31.8–33.4 GHz
CEPT/ECC/REC/(01)04	Recommended guidelines for the accommodation and assignment of multimedia wireless systems (MWS) and point-to-point (P-P) fixed wireless systems in the frequency band 40.5–43.5 GHz
CEPT/ECC/REC/(02)02	Channel arrangements for digital fixed service systems (point–to–point and point–to–multipoint) operating in the frequency band 31–31.3 GHz
CEPT/ECC/REC/(05)02	Use of the 64–66 GHz frequency band for Fixed Service
CEPT/ECC/REC/(05)07	Radio frequency channel arrangements for Fixed Service systems operating in the bands 71–76 GHz and 81–86 GHz
CEPT/ECC/REC/(06)04	Use of the band 5725–5875 MHz for Broadband Fixed Wireless Access (BFWA)
CEPT/ECC/REC/(08)04	The identification of frequency bands for the implementation of Broad Band Disaster Relief (BBDR) radio applications in the 5 GHz frequency range
CEPT/ECC/REC/(09)01	Use of the 57–64 GHz frequency band for point-to-point Fixed Wireless Systems
CEPT/ECC/REC/(10)02	A framework for authorisation regime of Global Navigation Satellite System (GNSS) repeaters
CEPT/ECC/REC/(11)04	Cross-border Coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency band 790–862 MHz
CEPT/ECC/REC/(11)08	Framework for authorisation regime of indoor global navigation satellite system (GNSS) pseudolites in the band 1559–1610 MHz
CEPT/ECC/REC/(11)09	UWB Location Tracking Systems TYPE 2 (LT2)
CEPT/ECC/REC/(11)10	Location tracking application for emergency and disaster
CEPT/ECC/REC/(15)01	Cross-border coordination for Mobile/Fixed Communications Networks (MFCN) in the frequency bands: 694–790 MHz, 1427–1518 MHz and 3400–3800 MHz
CEPT/ECC/REC/(18)01	Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 130–134 GHz, 141–148.5 GHz, 151.5–164 GHz and 167–174.8 GHz
CEPT/ECC/REC/(18)02	Radio frequency channel/block arrangements for Fixed Service systems operating in the bands 92–94 GHz, 94.1–100 GHz, 102–109.5 GHz and 111.8–114.25 GHz
CEPT/ECC/REC/(19)02	Guidance and methodologies when considering typical unwanted emissions in sharing/compatibility studies
CEPT/ERC/REC 12-02	Harmonised radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 12.75 GHz to 13.25 GHz
CEPT/ERC/REC 12-03	Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 17.7 GHz to 19.7 GHz

CEPT/ERC/REC 12-05	Harmonised radio frequency channel arrangements for digital terrestrial fixed systems operating in the band 10.0 GHz to 10.68 GHz
CEPT/ERC/REC 12-06	Preferred channel arrangements for Fixed Service systems operating in the frequency band 10.7-11.7 GHz
CEPT/ERC/REC 12-11	Radio frequency channel arrangements for Fixed Service systems operating in the bands 48.5 to 50.2 GHz / 50.9 to 52.6 GHz
CEPT/ERC/REC 12-12	Radio frequency channel, arrangement for Fixed Service Systems operating in the band 55.78 to 57.0 GHz
CEPT/ERC/REC 13-03	The use of the band 14.0–14.5 GHz for Very Small Aperture Terminals (VSAT) and Satellite News Gathering (SNG)
CEPT/ERC/REC 14-01	Radio–frequency channel arrangements for high capacity analogue and digital radio–relay systems operating in the band 5925 MHz – 6425 MHz
CEPT/ERC/REC 14-02	Radio-frequency channel arrangements for high, medium and low capacity digital fixed service systems operating in the band 6425 to 7125 MHz
CEPT/ERC/REC 25-10	Frequency Ranges for the Use of Terrestrial Audio and VideoProgramme Making and Special Events (PMSE) applications
CEPT/ERC/REC 70-03	Relating to the use of Short Range Devices (SRD)
CEPT/ERC/REC 74-01	Unwanted Emissions in the Spurious Domain
CEPT/ERC T/R 12-01	Harmonized radio frequency channel arrangements for analogue and digital terrestrial fixed systems operating in the band 37 GHz–39.5 GHz
CEPT/ERC T/R 13-01	Preferred channel arrangements for fixed services in the range 1–3 GHz
CEPT/ERC T/R 13-02	Preferred channel arrangements for fixed services in the range 22.0–29.5 GHz
CEPT/ERC T/R 25-08	Planning criteria and coordination of frequencies for land mobile systems in the range 29.7–470 MHz

IV. CEPT elektroonilise side komitee otsused

CEPT/ERC/DEC/(94)03	ERC Decision of 24 October 1994 on the frequency band to be designated for the coordinated introduction of the Digital European Cordless Telecommunications system
CEPT/ERC/DEC/(98)22	Exemption from Individual Licensing of DECT equipment
CEPT/ERC/DEC/(99)06	of 10 March 1999 on the harmonised introduction of satellite personal communication systems operating in the bands below 1GHz (S-PCS<1GHz)
CEPT/ERC/DEC/(99)15	ERC Decision of 1 June 1999 on the designation of the harmonised frequency band 40.5 to 43.5 GHz for the introduction of Multimedia Wireless Systems (MWS) and Point-to-Point (P-P) Fixed Wireless Systems
CEPT/ERC/DEC/(00)02	ERC Decision of 27 March 2000 on the use of the band 37.5–40.5 GHz by the fixed service and Earth stations of the fixed - satellite service (space-to-Earth)

CEPT/ERC/DEC/(00)07	The shared use of the band 17.7–19.7 GHz by the fixed service and earth stations of the fixed-satellite service (space-to-Earth)
CEPT/ERC/DEC/(00)08	ERC Decision of 19 October 2000 on the use of the band 10.7–12.5 GHz by the fixed service and Earth stations of the broadcasting-satellite and fixed-satellite Service (space-to-Earth)
CEPT/ERC/DEC/(01)11	Harmonised frequencies, technical characteristics and exemption from individual licensing of short range devices used for Flying Model control operating in the frequency band 34.995–35.225 MHz
CEPT/ERC/DEC/(01)12	Harmonised frequencies, technical characteristics and exemption from individual licensing of short range devices used for Model control operating on the frequencies 40.665, 40.675, 40.685 and 40.695 MHz
CEPT/ERC/DEC/(01)19	ERC Decision of 12 March 2001 on harmonised frequency bands to be designated for the Direct Mode Operation (DMO) of the Digital Land Mobile Systems for the Emergency Services
CEPT/ECC/DEC/(02)04	ECC Decision of 15 March 2002 on the use of the band 40.5–42.5 GHz by terrestrial (fixed service / broadcasting service) systems and uncoordinated Earth stations in the fixed satellite service and broadcasting–satellite service (space to Earth)
CEPT/ECC/DEC/(02)06	ECC Decision of 15 November 2002 on the designation of frequency band 2500–2690 MHz for UMTS/IMT–2000
CEPT/ECC/DEC/(03)04	Exemption from Individual Licensing of Very Small Aperture Terminals (VSAT) operating in the frequency bands 14.25–14.50 GHz Earth-to-space and 10.70–11.70 GHz space-to-Earth
CEPT/ECC/DEC/(04)03	The frequency band 77–81 GHz to be designated for the use of Automotive Short Range Radars
CEPT/ECC/DEC/(04)06	ECC Decision of 19 March 2004 on the availability of frequency bands for the introduction of Wide Band Digital Land Mobile PMR/PAMR in the 400 MHz and 800/900 MHz bands amended 26 June 09
CEPT/ECC/DEC/(04)08	ECC Decision of 9 July 2004 on the harmonised use of the 5 GHz frequency bands for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs)
CEPT/ECC/DEC/(04)09	ECC Decision of 12 November 2004 on designation of the bands 1518–1525 MHz and 1670–1675 MHz for the Mobile Satellite Service amended 25 June 2009
CEPT/ECC/DEC/(04)10	The frequency bands to be designated for the temporary introduction of Automotive Short Range Radars (SRR)
CEPT/ECC/DEC/(05)01	The use of the band 27.5–29.5 GHz by the Fixed Service and uncoordinated Earth stations of the Fixed-Satellite Service (Earth-to-space)
CEPT/ECC/DEC/(05)02	A harmonised frequency plan for the use of the band 169.4–169.8125 MHz
CEPT/ECC/DEC/(05)05	Harmonised utilization of spectrum for Mobile/Fixed Communications Networks (MFCN) operating within the band 2500–2690 MHz
CEPT/ECC/DEC/(05)08	The availability of frequency bands for high density applications in the Fixed-Satellite Service (space-to-Earth and Earth-to-space)

CEPT/ECC/DEC/(05)09	The Free Circulation and Use of Earth Stations on Board Vessels operating in Fixed Satellite Service Networks in the Frequency Bands 5925–6425 MHz (Earth-to-space) and 3700–4200 MHz (space-to-Earth)
CEPT/ECC/DEC/(05)10	The free circulation and use of Earth Stations on board Vessels operating in fixed satellite service networks in the frequency bands 14–14.5 GHz
CEPT/ECC/DEC/(05)11	The free circulation and use of Aircraft Earth Stations (AES) in the frequency bands 14.0–14.5 GHz (Earth-to-space), 10.7–11.7 GHz (space-to-Earth) and 12.5–12.75 GHz (space-to-Earth)
CEPT/ECC/DEC/(06)01	The harmonised utilisation of the bands 1920–1980 MHz and 2110–2170 MHz for mobile/fixed communications networks (MFCN) including terrestrial IMT systems
CEPT/ECC/DEC/(06)02	ECC Decision of 24 March 2006 on Exemption from Individual Licensing of Low e.i.r.p. Satellite Terminals (LEST) operating within the Frequency Bands 10.70–12.75 GHz or 19.7–20.2 GHz space–to–Earth and 14.00–14.25 GHz or 29.50–30.00 GHz Earth–to–Space.
CEPT/ECC/DEC/(06)03	Exemption from Individual Licensing of high e.i.r.p. satellite terminals (HEST) operating within the frequency bands 10.70–12.75 GHz or 19.70–20.20 GHz space-to-Earth and 14.00–14.25 GHz or 29.50–30.00 GHz Earth-to-space
CEPT/ECC/DEC/(06)04	The harmonised use, exemption from individual licensing and free circulation of devices using Ultra-Wideband (UWB) technology in bands below 10.6 GHz
CEPT/ECC/DEC/(06)05	ECC Decision of 7 July 2006 on the harmonised frequency bands to be designated for Air-Ground-Air operation (AGA) of Digital Land Mobile Systems for the Emergency Services
CEPT/ECC/DEC/(06)07	The harmonised use of airborne GSM and LTE systems in the frequency bands 1710–1785MHzand 1805–1880MHz, and airborne UMTS systems in the frequency bands 1920–1980 MHz and 2110–2170 MHz
CEPT/ECC/DEC/(06)08	The conditions for use of the radio spectrum by Ground- and Wall- Probing Radar (GPR/WPR) imaging systems
CEPT/ECC/DEC/(06)09	ECC Decision of 1 December 2006 on designation of the bands 1980–2010 MHz and 2170–2200 MHz for use by systems in the Mobile-Satellite Service (MSS) including those supplemented by a Complementary Ground Component (CGC) amended 5 September 2007
CEPT/ECC/DEC/(06)10	Transitional arrangements for the Fixed Service and Tactical Radio Relay Systems in the Bands 1980–2010 MHz and 2170–2200 MHz in order to facilitate the Harmonised Introduction and Development of Systems in the Mobile Satellite Service including those supplemented by a Complementary Ground Component
CEPT/ECC/DEC/(06)13	Designation of the bands 880–915 MHz, 925–960 MHz, 1710–1785 MHz and 1805–1880 MHz for terrestrial UMTS, LTE, WiMAX and IoT cellular systems

CEPT/ECC/DEC/(07)01	The harmonised use, exemption from individual licensing and free circulation of Material Sensing Devices using Ultra-Wideband (UWB) technology
CEPT/ECC/DEC/(08)01	The harmonised use of Safety-Related Intelligent Transport Systems (ITS) in the 5875–5935 MHz frequency band
CEPT/ECC/DEC/(08)05	The harmonisation of frequency bands for the implementation of digital Public Protection and Disaster Relief (PPDR) narrow band and wide band radio applications in bands within the 380–470 MHz range
CEPT/ECC/DEC/(08)08	The harmonised use of GSM systems in the 900 MHz and 1800 MHz bands, UMTS systems in the 2 GHz band and LTE systems in the 1800 MHz and 2.6 GHz bands on board vessels
CEPT/ECC/DEC/(09)01	Harmonised use of the 63.72–65.88 GHz frequency band for Intelligent Transport Systems (ITS)
CEPT/ECC/DEC/(09)02	The harmonisation of the bands 1610–1626.5 MHz and 2483.5–2500 MHz for use by systems in the Mobile-Satellite Service
CEPT/ECC/DEC/(09)03	ECC Decision of 30 October 2009 on harmonised conditions for Mobile/Fixed Communications Networks (MFCN)operating in the band 790–862 MHz
CEPT/ECC/DEC/(09)04	ECC Decision of 30 October 2009 on exemption from individual licensing and the free circulation and use of transmit-only mobile satellite terminals operating in the Mobile-Satellite Service allocations in the 1613.8–1626.5 MHz band
CEPT/ECC/DEC/(10)02	ECC Decision of 12 November 2010 on compatibility between the fixed satellite service in the 30–31 GHz band and the Earth exploration satellite service (passive) in the 31.3–31.5 GHz band
CEPT/ECC/DEC/(11)02	Industrial Level Probing Radars (LPR) operating in frequency bands 6–8.5 GHz, 24.05–26.5 GHz, 57–64 GHz and 75–85 GHz
CEPT/ECC/DEC/(11)03	The harmonised use of frequencies for Citizens' Band (CB) radio equipment
CEPT/ECC/DEC/(12)01	Exemption from individual licensing and free circulation and use of terrestrial and satellite mobile terminals operating under the control of networks
CEPT/ECC/DEC/(12)03	The harmonised conditions for UWB applications onboard aircraft
CEPT/ECC/DEC/(13)01	The harmonised use, free circulation and exemption from individual licensing of Earth Stations On Mobile Platforms (ESOMPs) within the frequency bands 17.3–20.2 GHz and 27.5–30.0 GHz
CEPT/ECC/DEC/(14)02	Harmonised technical and regulatory conditions for the use of the band 2300–2400 MHz for Mobile/Fixed Communications Networks (MFCN)
CEPT/ECC/DEC/(15)01	Harmonised technical conditions for mobile/fixed communications networks (MFCN) in the band 694–790 MHz including a paired frequency arrangement (Frequency Division Duplex 2x30 MHz) and an optional unpaired frequency arrangement (Supplemental Downlink)
CEPT/ECC/DEC/(15)04	The harmonised use, free circulation and exemption from individual licensing of Land and Maritime Earth Stations On Mobile Platforms (ESOMPs) operating with NGSO FSS satellite

	systems in the frequency ranges 17.3–20.2 GHz, 27.5–29.1 GHz and 29.5–30.0 GHz
CEPT/ECC/DEC/(15)05	The harmonised frequency range 446.0–446.2 MHz, technical characteristics, exemption from individual licensing and free carriage and use of analogue and digital PMR 446 applications
CEPT/ECC/DEC/(16)01	The harmonised frequency band 76–77 GHz, technical characteristics, exemption from individual licensing and free carriage and use of obstacle detection radars for rotorcraft use
CEPT/ECC/DEC/(17)04	The harmonised use and exemption from individual licensing of fixed earth stations operating with NGSO FSS satellite systems in the frequency bands 10.7–12.75 GHz and 14.0–14.5 GHz
CEPT/ECC/DEC/(18)04	The harmonised use, exemption from individual licensing and free circulation and use of land based Earth Stations In-Motion (ESIM) operating with GSO FSS satellite systems in the frequency bands 10.7–12.75 GHz and 14.0–14.5 GHz
CEPT/ECC/DEC/(18)05	The harmonised use, exemption from individual licensing and free circulation and use of Earth Stations In-Motion (ESIM) operating with NGSO FSS satellite systems in the frequency bands 10.7–12.75 GHz and 14.0–14.5 GHz
CEPT/ECC/DEC/(18)06	Harmonised technical conditions for Mobile/Fixed Communications Networks (MFCN) in the band 24.25–27.5 GHz
CEPT/ECC/DEC/(19)02	Land mobile systems in the frequency ranges 68–87.5 MHz, 146–174 MHz, 406.1–410 MHz, 410–430 MHz, 440–450 MHz and 450–470 MHz
CEPT/ECC/DEC/(19)03	Harmonised usage of the channels of the Radio Regulations Appendix 18 (transmitting frequencies in the VHF maritime mobile band)
CEPT/ECC/DEC/(19)04	The harmonised use of spectrum, free circulation and use of earth stations on-board aircraft operating with GSO FSS networks and NGSO FSS systems in the frequency bands 12.75–13.25 GHz (Earth-to-space) and 10.7–12.75 GHz (space-to-Earth)
CEPT/ECC/DEC/(20)01	On the harmonised use of the frequency band 5945–6425 MHz for Wireless Access Systems including Radio Local Area Networks (WAS/RLAN)

V. Nõukogu direktiivid

91/287/EMÜ	Nõukogu direktiiv, 3. juuni 1991, sagedusriba kohta, mis eraldatakse Euroopa digitaalse juhtmeta telekommunikatsioonisüsteemi (DECT) kooskõlastatud kasutuselevõtmiseks ühenduses
90/385/EMÜ	Nõukogu direktiiv, 20. juuni 1990, aktiivseid siirdatavaid meditsiiniseadmeid käsitlevate liikmesriikide õigusnormide ühtlustamise kohta

VI. ITU soovitused

ITU-R F.636	Radio-frequency channel arrangements for radio-relay systems operating in the 15 GHz band
ITU-R F.637	Radio-frequency channel arrangements for radio-relay systems operating in the 23 GHz band

ITU-R F.385	Radio-frequency channel arrangements for radio-relay systems operating in the 7 GHz band
ITU-R F.386	Radio-frequency channel arrangements for medium and high capacity analogue or digital radio-relay systems operating in the 8 GHz band
ITU-R SM.329	Unwanted emissions in the spurious domain
ITU-R M.633	Transmission characteristics of a satellite emergency position-indicating radiobeacon (satellite EPIRB) system operating through a low polar-orbiting satellite system in the 406 MHz band
ITU-R M.690	Transmission characteristics of emergency position-indicating radio beacons (EPIRBs) operating on carrier frequencies of 121.5 MHz and 243 MHz
ITU-R M.1174	Technical characteristics of equipment used for on-board vessel communications in the bands between 450 and 470 MHz
ITU-R M.1177	Techniques for measurement of unwanted emissions of radar systems
ITU-R M.1343	Essential technical requirements of mobile Earth stations for global non-geostationary mobile-satellite service systems in the band 1–3 GHz
ITU-R M.2010	Characteristics of a digital system, named Navigational Data for broadcasting maritime safety and security related information from shore-to-ship in the 500 kHz band

VII. Rahvusvaheline Tsiviillennunduse Organisatsiooni (International Civil Aviation Organization, ICAO) dokumendid

ICAO dokumendid	ICAO konventsiooni lisa 10, köide I ICAO konventsiooni lisa 10, köide IV

VIII. Euroopa Komisjoni otsused

2001/148/EÜ	Komisjoni otsus, 21. veebruar 2001, direktiivi 1999/5/EÜ artikli 3 lõike 3 punkti e kohaldamisest laviinimajakate suhtes
2004/545/EÜ	Komisjoni otsus, 8. juuli 2004, raadiospektri kasutuse ühtlustamise kohta sagedusalal 79 GHz seoses lähiala liiklusradarite kasutusega ühenduses
2005/50/EÜ	Komisjoni otsus, 17. jaanuar 2005, 24 GHz raadiosagedusala ajutise kasutuse ühtlustamise kohta seoses sõidukite lähitoimeradarseadmete kasutusega ühenduses
2005/513/EÜ	Komisjoni otsus, 11. juuli 2005, raadiospektri ühtlustatud kasutamise kohta sagedusalas 5 GHz traadita juurdepääsusüsteemide, sealhulgas raadio-kohtvõrkude (WAS/RLAN) rakendamiseks
2005/631/EÜ	Komisjoni otsus, 29. august 2005, Euroopa Parlamendi ja nõukogu direktiivis 1999/5/EÜ osutatud oluliste nõuete kohta, mis tagavad CospasSarsat asukohamajakate juurdepääsu hädaabiteenustele
2006/771/EÜ	Komisjoni otsus, 9. november 2006, lähitoimeseadmete raadiospektri ühtlustamise kohta
2007/90/EÜ	Komisjoni otsus,12. veebruar 2007, millega muudetakse otsust 2005/513/EÜ raadiospektri ühtlustatud kasutamise kohta sagedusalas 5 GHz traadita juurdepääsusüsteemide, sealhulgas raadio-kohtvõrkude (WAS/RLAN) rakendamiseks
2007/98/EÜ	Komisjoni otsus, 14. veebruar 2007, raadiospektri 2 GHz sagedusalas ühtlustatud kasutamise kohta liikuva kosmoseside süsteemi rakendamiseks

2008/294/EÜ	Komisjoni otsus, 7. aprill 2008 , õhusõiduki pardal osutatavate mobiilsideteenuste spektrikasutuse ühtlustatud tingimuste kohta ühenduses
2008/411/EÜ	Komisjoni otsus, 21. mai 2008, sagedusala 3400–3800 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik ühenduses pakkuda elektroonilisi sideteenuseid
2008/477/EÜ	Komisjoni otsus, 13. juuni 2008, sagedusala 2500–2690 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik ühenduses pakkuda elektroonilisi sideteenuseid
626/2008/EÜ	Euroopa Parlamendi ja nõukogu otsus nr 626/2008/EÜ, 30. juuni 2008, liikuva kosmoseside teenuseid pakkuvate süsteemide valiku ja nendega seotud lubade andmise kohta
2009/766/EÜ	Komisjoni otsus, 16. oktoober 2009, sagedusalade 900 MHz ja 1 800 MHz ühtlustamise kohta ühenduses üleeuroopalisi elektroonilisi sideteenuseid pakkuda võimaldavate maapealsete süsteemide jaoks
2010/166/EÜ	Komisjoni otsus, 19. märts 2010 , laeva pardal osutatavate mobiilsideteenuste (MCV-teenuste) raadiospektrikasutuse ühtlustatud tingimuste kohta Euroopa Liidus
2010/267/EL	Komisjoni otsus, 6. mai 2010, ühtlustatud tehniliste tingimuste kohta sagedusala 790–862 MHz kasutamiseks selliste maapealsete süsteemide puhul, millega on võimalik Euroopa Liidus pakkuda elektroonilisi sideteenuseid
2011/251/EL	Komisjoni rakendusotsus, 18. aprill 2011, millega muudetakse otsust 2009/766/EÜ sagedusalade 900 MHz ja 1800 MHz ühtlustamise kohta ühenduses üleeuroopalisi elektroonilisi sideteenuseid pakkuda võimaldavate maapealsete süsteemide jaoks
2011/829/EL	Komisjoni rakendusotsus, 8. detsember 2011, millega muudetakse otsust 2006/771/EÜ lähitoimeseadmete raadiospektri ühtlustamise kohta
2012/688/EL	Komisjoni rakendusotsus 5. november 2012, sagedusvahemike 1920–1980 MHz ja 2110–2170 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik pakkuda elektroonilisi sideteenuseid Euroopa Liidus
(EL) 1079/2012	Komisjoni 16. novembri 2012 rakendusmäärus 1079/2012/EL, millega kehtestatakse ühtses Euroopa taevas kasutatavad kõneside kanalisammud
2013/654/EL	Komisjoni rakendusotsus 12. november 2013, millega muudetakse otsust 2008/294/EÜ, et lisada õhusõiduki pardal osutatavate mobiilsideteenuste (MCA teenused) täiendavad juurdepääsutehnoloogiad ja sagedusalad
2014/276/EL	Komisjoni rakendusotsus, 2. mai 2014, otsuse 2008/411/EÜ (sagedusala 3400–3800 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik ühenduses pakkuda elektroonilise side teenuseid) muutmise kohta
2014/641/EL	Komisjoni rakendusotsus, 1. september 2014, milles käsitletakse liidus programmitootmise ja erisündmuste edastamise traadita audioseadmetes kasutatava raadiospektriga seotud ühtlustatud tehnilisi tingimusi
2014/276/EL	Komisjoni rakendusotsus, 2. mai 2014, otsuse 2008/411/EÜ (sagedusala 3400–3800 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik ühenduses pakkuda elektroonilise side teenuseid) muutmise kohta
(EL) 2015/750	Komisjoni rakendusotsus (EL) 2015/750, 8. mai 2015, sagedusala 1427–1517 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik pakkuda elektroonilise side teenuseid Euroopa Liidus

(EL) 2016/339	Komisjoni rakendusotsus (EL) 8. märts 2016, 2010–2025 MHz sagedusala ühtlustamise kohta programmitootmiseks ja erisündmuste edastamiseks kasutatavate portatiivsete või mobiilsete traadita videolinkide ja juhtmeta kaamerate puhul
(EL) 2016/687	Komisjoni rakndustsus (EL) 2016/687, 28. aprill 2016, sagedusala 694–790 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik osutada traadita elektroonilise lairibaside teenuseid, ja selle sagedusala riigisiseseks paindlikuks kasutamiseks Euroopa Liidus
(EL) 2017/191	Komisjoni rakendusotsus (EL) 2017/191, 1. veebruar 2017, millega muudetakse otsust 2010/166/EL, et võtta Euroopa Liidus laeva pardal osutatavate mobiilsideteenuste (MCV-teenuste) puhul kasutusele uued tehnoloogiad ja sagedused
(EL) 2017/899	Euroopa parlamendi ja nõukogu otsus (EL) 2017/899, 17. mai 2017, 470–790 MHz sagedusala kasutamise kohta liidus
(EL) 2017/1483	Komisjoni rakendusotsus (EL) 2017/1483, 8. august 2017, millega muudetakse otsust 2006/771/EÜ lähitoimeseadmete raadiospektri ühtlustamise kohta ja tunnistatakse kehtetuks otsus 2006/804/EÜ
(EL) 2017/2077	Komisjoni rakendusotsus (EL) 2017/2077, 10. november 2017, millega muudetakse otsust 2005/50/EÜ 24 GHz raadiosagedusala ajutise kasutuse ühtlustamise kohta seoses sõidukite lähitoimeradarseadmete kasutusega ühenduses
(EL) 2018/637	Komisjoni rakendusotsus (EL) 2018/637, 20. aprill 2018, millega muudetakse otsust 2009/766/EÜ (sagedusalade 900 MHz ja 1800 MHz ühtlustamise kohta ühenduses üleeuroopalisi elektroonilisi sideteenuseid pakkuda võimaldavate maapealsete süsteemide jaoks) osas, mis puudutab asjade interneti suhtes kohaldatavaid tehnilisi tingimusi
(EL) 2018/661	Komisjoni rakendusotsus (EL) 2018/661, 26. aprill 2018, millega muudetakse rakendusotsust (EL) 2015/750 (sagedusala 1452–1492 MHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik pakkuda elektroonilise side teenuseid Euroopa Liidus) seoses selle laiendamisega ühtlustatud sagedusaladele 1427–1452 MHz ja 1492–1517 MHz
(EL) 2018/1139	Euroopa Parlamendi ja nõukogu määrus (EL) 2018/1139, 4. juuli 2018, mis käsitleb tsiviillennunduse valdkonna ühisnorme ja millega luuakse Euroopa Liidu Lennundusohutusamet ning millega muudetakse Euroopa Parlamendi ja nõukogu määrusi (EÜ) nr 2111/2005, (EÜ) nr 1008/2008, (EL) nr 996/2010, (EL) nr 376/2014 ja Euroopa Parlamendi ja nõukogu direktiive 2014/30/EL ning 2014/53/EL ning tunnistatakse kehtetuks Euroopa Parlamendi ja nõukogu määrused (EÜ) nr 552/2004 ja (EÜ) nr 216/2008 ning nõukogu määrus (EMÜ) nr 3922/91
(EL) 2018/1538	Komisjoni rakendusotsus 11. oktoober 2018, lähitoimeseadmete raadiospektri ühtlustamise kohta sagedusalades 874–876 MHz ja 915–921 MHz
(EL) 2019/235	Komisjoni rakendusotsus (EL) 2019/235, 24. jaanuar 2019, otsuse 2008/411/EÜ muutmise kohta seoses sagedusala 3400–3800 MHz suhtes kohaldatavate tehniliste tingimuste ajakohastamisega
(EL) 2019/784	Komisjoni rakendusotsus (EL) 2019/784, 14. mai 2019, sagedusala 24,25–27,5 GHz ühtlustamise kohta maapealsete süsteemide jaoks, millega on võimalik liidus pakkuda traadita elektroonilise lairibaside teenuseid

(EL) 2019/785	Komisjoni rakendusotsus, 14. mai 2019, millega ühtlustatakse raadiospektri kasutus ultralairibaseadmetel ja tunnistatakse kehtetuks otsus 2007/131/EÜ
(EL) 2019/1345	Komisjoni rakendusotsus, 2. august 2019, millega muudetakse otsust 2006/771/EÜ, et ajakohastada ühtlustatud tehnilisi tingimusi lähitoime-seadmete jaoks kasutatavate raadiosageduste vallas
(EL) 2020/590	Komisjoni rakendusotsus (EL) 2020/590, 24. aprill 2020, millega muudetakse otsust (EL) 2019/784 seoses sagedusala 24,25–27,5 GHz suhtes kohaldatavate tehniliste tingimuste ajakohastamisega
(EL) 2020/636	Komisjoni rakendusotsus (EL) 2020/636, 8. mai 2020, millega muudetakse otsust 2008/477/EÜ seoses sagedusala 2500–2690 MHz suhtes kohaldatavate tehniliste tingimuste ajakohastamisega
(EL) 2020/667	Komisjoni rakendusotsus (EL) 2020/667, 6. mai 2020, millega muudetakse otsust 2012/688/EL seoses sagedusalade 1920–1980 ja 2110–2170 MHz suhtes kohaldatavate tehniliste tingimuste ajakohastamisega
(EL) 2020/1426	Komisjoni rakendusotsus 7. oktoober 2020, mis käsitleb raadiospektri sagedusala 5875–5935 MHz ühtlustatud kasutamist ohutusega seotud intelligentsete transpordisüsteemide (ITS) rakenduste jaoks ja millega tunnistatakse kehtetuks otsus 2008/671/EÜ

IX. Rahvusvahelised kokkulepped

Stockholm 1961 kokkulepe	Final Acts of the European VHF/UHF Broadcasting conference (muudetud Genf, 2006)
Genf 1975 kokkulepe	Final acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3)
Genf 1984 kokkulepe	Final Acts of the Regional Administrative Conference for the planning of VHF Sound Broadcasting (Region 1 and part of Region 3)
Genf 1985 kokkulepe	Plans for Maritime Radionavigation Services in the European Maritime Area and for MF Maritime Mobile and Aeronautical Radionavigation Services
Genf 2006 kokkulepe	Regional Agreement relating to the planning of the digital terrestrial broadcasting service in Region 1 (parts of Region 1 situated to the west of meridian 170°E and to the north of parallel 40°S, except the territory of Mongolia) and in the Islamic Republic of Iran, in the frequency bands 174–230 MHz and 470–862 MHz
Wiesbaden 1995, rev CO 07 kokkulepe	The CEPT T-DAB planning meeting, Wiesbaden, 3rd to 21st July 1995; FINAL ACTS of the CEPT T-DAB Planning
Maastricht 2002 kokkulepe	The Maastricht 2002 Special Arrangement (muudetud Constanta 2007)

X. ITU raadioeeskirjade lisad ja resolutsioonid

RR App. 17	ITU “Radio Regulations” Appendix 17 “Frequencies and channeling arrangements in the high-frequency bands for the maritime mobile service”, Geneva 1998 (Rev. WRC-15)
RR App. 18	ITU “Radio Regulations” Appendix 18 “Table of transmitting frequencies in the VHF maritime mobile band”, Geneva 1998

RR App. 25	ITU “Radio Regulations” Appendix 25 “Provisions and associated frequency allotment Plan for coast radiotelephone stations operating in the exclusive maritime mobile bands between 4000–27 500 kHz”, Geneva 1998
RR App. 26	ITU “Radio Regulations” Appendix 26 “Provisions and associated Frequency Allotment Plan for the aeronautical mobile (OR) service in the bands allocated exclusively to that service between 3025 kHz and 18 030 kHz”, Geneva 1998
RR App. 27	ITU “Radio Regulations” Appendix 27 “Frequency allotment Plan for the aeronautical mobile (R) service and related information”, Geneva 1998
RR App. 30	ITU “Radio Regulations” Appendix 30 “Provisions for all services and associated Plans for the broadcasting-satellite service in the frequency bands 11,7–12,2 GHz (in Region 3), 11,7–12,5 GHz (in Region 1) and 12,2–12,7 GHz (in Region 2)”, Geneva 1998
RR Res. 32	ITU "Radio Regulations" Resolution 32 “Regulatory procedures for frequency assignments to non-geostationary-satellite networks or systems identified as short-duration mission not subject to the application of Section II of Article 9”
RR Res. 217	ITU “Radio Regulations” Resolution 217 “Implementation of wind profiler radars”
RR Res. 243	Terrestrial component of International Mobile Telecommunications in the frequency bands 37–43.5 GHz and 47.2–48.2 GHz
RR Res. 339	ITU “Radio Regulations” Resolution 339 “Coordination of NAVTEX services”
RR Res. 418	ITU “Radio Regulations” Resolution 418 “Use of the frequency band 5091–5250 MHz by the aeronautical mobile service for telemetry applications”
RR Res. 425	ITU “Radio Regulations” Resolution 425 “Use of the frequency band 1087.7–1092.3 MHz by the aeronautical mobile-satellite (R) service (Earth-to-space) to facilitate global flight tracking for civil aviation”
RR Res. 517	ITU “Radio Regulations” Resolution 517 “Introduction of digitally modulated emissions in the high-frequency bands between 3 200 kHz and 26 100 kHz allocated to the broadcasting service”
RR Res. 660	ITU "Radio Regulations" Resolution 660 “Use of the frequency band 137–138 MHz by non-geostationary satellites with short-duration missions in the space operation service”
RR Res. 748	ITU “Radio Regulations” Resolution 748 “Compatibility between the aeronautical mobile (R) service and the fixed-satellite service (Earth-to-space) in the frequency band 5091–5150 MHz”

XI. ETSI standardid

EN 300 086	Liikuv maaside Eeskätt analoogkõne jaoks mõeldud kõrgsagedusliku sise- või välisühendusega raadioseadmed Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 300 113	Liikuv maaside; Antenniühendusega pidevat või vahelduvat mähisjoone modulatsiooni kasutavad raadioseadmed andme- ja/või kõneedastuseks; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel

EN 300 219	Liikuv maaside; Raadioseadmed, mis signaale edastades kutsuvad vastuvõtjas esile kindlatüübilise reaktsiooni; Harmoneeritud standard direktiivi 2014/ 53/EL artikli 3.2 oluliste nõuete alusel
EN 300 220-2	Raadiosagedusalas 25 MHz kuni 1 000 MHz töötavad lähitoimeseadmed (SRD); Osa 2: Mittespetsiifiliste raadioseadmete harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 300 224	Liikuv maaside; Raadiosagedusalas 25 MHz –470 MHz töötavad isikuotsingusüsteemi raadioseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 300 296	Liikuv maaside; Peamiselt analoogkõneks ette nähtud liitantenniga raadioseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 300 328	Lairiba edastussüsteemid; Lairibamodulatsiooni tehnoloogiat kasutavad 2,4 GHz ISM raadiosagedusalas töötavad andmeedastusseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel.
EN 300 330	Lähitoimeseadmed (SRD); Raadiosagedusalas 9 kHz kuni 25 MHz töötavad raadioseadmed ja sagedusalas 9 kHz kuni 30 MHz töötavad induktiivseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel.
EN 300 341	Liikuv maaside; Liitantenni kasutavad raadioseadmed, mis signaale edastades kutsuvad vastuvõtjas esile kindlatüübilise reaktsiooni; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 300 373	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM)MF ja HF raadiosagedusalas kasutatavad liikuva mereside raadiosaatjad ja -vastuvõtjad
EN 300 390	Liikuv maaside; Liitantenniga raadioseadmed andme- ja kõneedastatuseks; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 300 422-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadiosagedusalas 25 MHz kuni 3 GHz töötavad raadiomikrofonid Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 300 433-1	Electromagnetic compatibility and Radio spectrum Matters (ERM); Citizens' Band (CB) radio equipment; Part 1: Technical characteristics and methods of measurement
EN 300 433-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Liikuv maaside Üldkasutatava raadiosagedusala kahe külgribaga (DSB) ja /või ühe külgribaga (SSB) amplituudmoduleeritud raadioseadmed Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 300 440	Lähitoimeseadmed (SRD); Raadiosagedusalas 1 GHz kuni 40 GHz kasutatavad raadioseadmed; Raadiospektrile juurdepääsu harmoneeritud standard
EN 300 471	Liikuv maaside; Standardile EN 300 113 vastavate seadmete ühiskasutusega kanalite kanalijagamise reeglid; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 300 674-2-1	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Maanteetranspordi ja liikluse telemaatika (RTTT) Tööstuse, teaduse ja meditsiinirakenduste (TTM) sagedusalas raadiosagedusel 5,8 GHz töötavad sihtotstarbelise lähitoimeside (DSRC) edastusseadmed (500 kbit/s / 250

	kbit/s) Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel Osa 2-1: Nõuded maantee infrastruktuuri seadmetele(RSU)
EN 300 674-2-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Maanteetranspordi ja liikluse telemaatika (RTTT) Tööstuse, teaduse ja meditsiinirakenduste (TTM) sagedusalas raadiosagedusel 5,8 GHz töötavad sihtotstarbelise lähitoimeside (DSRC) edastusseadmed (500 kbit/s / 250 kbit/s) Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel Osa 2-2: Nõuded pardaseadmetele (OBU)
EN 300 676-2	VHF raadiosagedusala liikuva lennuside teenistuse maapealsed kaasaskantavad, liikuvad ja kohtkindlalt paigaldatavad amplituudmodulatsiooniga raadiosaatjad, vastuvõtjad ja transiiverid. Osa 2: Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 300 720	Ultrakõrgsagedusel (UHF) töötavad pardasidesüsteemid ja seadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 301 025	Üldside VHF raadiotelefoniseadmed ja klassi D digitaalselektiivväljakutse (DSC) lisaseadmed; Harmoneeritud standard juurdepääsuks raadiospektrile ja päästeteenistustele
EN 301 091-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed (SRD) Maanteetranspordi ja liikluse telemaatika Raadiosagedusvahemikus 76 GHz kuni 77 GHz töötavad radarseadmed Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 166	Liikuv maaside; Antenni ühendusega kitsaribalisel kanalil töötavad analoog- ja/või digitaalside (kõne ja /või andmeedastus) raadioseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 301 178	Liikuva mereside VHF sagedusalades töötav teisaldatav ülikõrgsagedusala (VHF) raadiotelefon (mitte GMDSS rakenduste jaoks); Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 301 357-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadiosagedusalas 25 MHz kuni 2000 MHz töötavad juhtmeta audioseadmed Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 301 406	Raadiotelefonisüsteem (DECT).Raadiotelefonisüsteemi (DECT) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel.Üldised raadionõuded
EN 301 426	Kosmoseside maajaamad ja süsteemid (SES) Raadiosagedusalades 1,5/1,6 GHz madala andmeedastuskiirusega töötavate liikuvate kosmoseside maajaamade (LMES) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 301 428	Kosmoseside maajaamad ja süsteemid (SES) Mikroantennjaamade (VSAT) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuded raadiosagedusalades 11/12/14 GHz signaali edastust või edastust ja vastuvõttu või ainult vastuvõttu võimaldavatele kosmoseside maajaamadele
EN 301 430	Kosmoseside maajaamad ja süsteemid (SES) Raadiosagedusalades 11-12/13-14 GHz töötavate ja uudiste ajutiseks edastamiseks mõeldud kosmosesidesüsteemi liikuvate maajaamade (SNG TES) harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel
EN 301 441	Kosmoseside maajaamad ja süsteemid (SES) Liikuva kosmoseside (MSS) raadiosagedusalades 1,6/2,4 GHz töötavate isikliku kasutusega kosmosesidevõrkude (S PCN) liikuvate maajaamade (MES), kaasa arvatud

	käsijaamade harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 301 442	Kosmoseside maajaamad ja süsteemid (SES) Liikuva kosmoseside (MES) raadiosagedusalas 2 GHz töötavate isikliku kasutusega kosmosesidesüsteemi (S-PCN) liikuvate maajaamade (MES), kaasa arvatud käsijaamade harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 301 444	Kosmoseside maajaamad ja süsteemid (SES) Raadiosagedusalades 1,5 GHz ja 1,6 GHz töötavate ning kõne- ja/või andmeedastust võimaldavate liikuva maaside maajaamade (LMES) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 447	Kosmoseside maajaamad ja süsteemid (SES) Paiksele kosmosesidele (FSS) eraldatud raadiosagedusalades 4/6 GHz töötavate veesõidukitele paigaldatud kosmoseside maajaamade (ESV) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 459	Kosmoseside maajaamad ja süsteemid (SES) Saatesagedusega 29,5 kuni 30,0 GHz geostatsionaarorbiidi satelliitide satelliitside interaktiivsete terminalide (SIT) ja satelliitside kasutajaterminalide (SUT) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 489-1	Raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard; Osa 1: Üldised tehnilised nõuded; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.1b ja direktiivi 2014/30/EL artikli 6 alusel
EN 301 489-3	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard Osa 3: Eritingimused raadiosagedusalades 9 kHz kuni 40 GHz töötavatele lähitoimeseadmetele (SRD)
EN 301 489-12	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM).Raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard. Osa 12:Eritingimused paikse kosmoseside (FSS) raadiosagedusalas 4 GHz kuni 30 GHz töötavatele VSAT-terminalidele ja satelliitside interaktiivsetele maajaamadele
EN 301 489-17	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadioseadmete elektromagnetilise ühilduvuse (EMC) standard Osa 17: Eritingimused lairiba andmeedastussüsteemidele
EN 301 489-20	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard Osa 20: Eritingimused liikuvas kosmosesides (MSS) kasutatavatele liikuvatele maajaamadele (MES)
EN 301 502	Mobiiltelefonisüsteem (GSM); Baasjaamade (BS) seadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 301 511	Globaalne mobiiltelefonisüsteem (GSM) Raadiosagedusalades GSM 900 ja DCS 1 800 töötavate liikuvate raadiojaamade põhinõuded, harmoneeritud standard R&TTE direktiivi (1999/5/EÜ) artikli 3.2 alusel
EN 301 559	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD); Raadiosagedusalas 2483,5–2500 MHz töötavad madala võimsusega aktiivsed meditsiinilised implantaadid (LP-AMI); Osa 2; Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 301 681	Kosmoseside maajaamad ja süsteemid (SES) Liikuva kosmoseside (MSS) raadiosagedusalades 1,5/1,6 GHz töötavate geostatsionaarse liikuva

	kosmosesidesüsteemi isikliku kasutusega satelliitsidevõrkude (S-PCN) liikuvate maajaamade (MES) kaasa arvatud käsijaamade harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 300 718-1	Sagedusel 457 kHz töötavad laviiniohvrite detekteerimisseadmed; Saate – vastuvõtu süsteemid; Osa 1: Harmoneeritud standard raadiospektrile juurdepääsuks
EN 300 718-2	Sagedusel 457 kHz töötavad laviiniohvrite detekteerimisseadmed; Saate – vastuvõtu süsteemid; Osa 2: Harmoneeritud standard hädaolukorra teenuste funktsioonide jaoks
EN 301 721	Kosmoseside maajaamad ja süsteemid (SES); Raadiosagedusel alla 1 GHz maalähedase orbiidi (LEO) satelliitsüsteemide madala andmeedastuskiirusega (LBRDC) liikuvate maajaamade (MES) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 783-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Liikuv maaside kaubandusest kättesaadavad amatöör-raadioseadmed Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 301 839	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed Raadiosagedusalas 402 MHz kuni 405 MHz töötavad väga väikese võimsusega aktiivsed meditsiinilised implantaadid (ULP-AMI) ja nende lisatarvikud (ULP-AMI-P) Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 301 841-3	VHF maa-õhk digitaallink (VDL) mood 2; Maapealsete seadmete tehnilised karakteristikud ja mõõtmismeetodid; Osa 3: Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 301 842-5	VHF maa-õhk digitaallink (VDL) mood 4 raadioseade; Maapealsete seadmete tehnilised karakteristikud ja mõõtmismeetodid; Osa 5: Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 301 843-1	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Mereside raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard Osa 1: Üldised tehnilised nõuded
EN 301 843-6	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Mereside raadioseadmete ja raadiosideteenistuste elektromagnetilise ühilduvuse (EMC) standard Osa 6: Eritingimused veesõiduki pardal olevatele saatesagedusega üle 3 GHz kosmoseside maajaamadele
EN 301 893	Lairiba raadiojuurdepääsuvõrgud (BRAN) Raadiosagedusalas 5 GHz töötavate suure edastuskiirusega RLAN seadmed Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 301 908-1	IMT kärgsidevõrgud; Harmoneeritud standard juurdepääsuks raadiospektrile; Osa 1: Sissejuhatus ja üldised nõuded
EN 301 908-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE) Osa 2: IMT-2000, otsese hajutamisega CDMA (UTRA FDD ja E-UTRA FDD) kasutajaseadmete harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 301 908-3	IMT kärgsidevõrgud; Harmoneeritud standard juurdepääsuks raadiospektrile; Osa 3: Otsese hajutamisega CDMA (UTRA FDD) baasjaamad (BS)
EN 301 908-4	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE) Osa 4: IMT-2000, mitme kandjaga

	CDMA (cdma2000 ja UMB) kasutajaseadmete põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel
EN 301 908-6	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE) Osa 6: IMT-2000, CDMA TDD (UTRA TDD ja E-UTRA TDD) kasutajaseadmete põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel
EN 301 908-9	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS) ja kasutajaseadmed (UE) Osa 9: IMT-2000, ühe kandjaga TDMA (UWC 136) (BS) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 301 908-11	IMT kärgsidevõrgud; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel; Osa 11: Otsese hajutamisega CDMA (UTRA FDD) repiiterid
EN 301 908-13	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE) Osa 13: IMT-2000 E-UTRA kasutajaseadmete põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel
EN 301 908-14	IMT kärgsidevõrgud; Harmoneeritud standard juurdepääsuks raadiospektrile; Osa 14: E-UTRA baasjaamad (BS)
EN 301 908-15	IMT kärgsidevõrgud; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel; Osa 15: E-UTRA FDD repiiterid
EN 301 908-16	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Kolmanda põlvkonna mobiilsidevõrgu IMT-2000 baasjaamad (BS), repiiterid ja kasutajaseadmed (UE) Osa 16: IMT-2000 CDMA mitme kandjaga UMB kasutajaseadmete põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel
EN 301 908-18	IMT kärgsidevõrgud; Harmoneeritud standard juurdepääsuks raadiospektrile; Osa 18. E-UTRA, UTRA ja GSM/EDGE multistandard-raadio (MSR) baasjaam (BS)
EN 301 908-19	IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 19: OFDMA TDD WMAN (Mobile WiMAX) TDD User Equipment (UE)
EN 301 908-22	IMT kärgsidevõrgud; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel; Osa 22: OFDMA TDD WMAN (Mobile WiMAX) FDD baasjaamad (BS)
EN 301 908-24	IMT cellular networks; Harmonised Standard for access to radio spectrum Part 24: New Radio (NR) Base Stations (BS)
EN 301 908-25	IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 25: New Radio (NR) User Equipment (UE)
EN 302 017	Amplituudmodulatsiooniga (AM) raadioringhäälingusüsteemi raadiosaateseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 302 018	Sagedusmoduleeritud (FM) raadioringhäälingusaatjad; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 302 054	Meteoroloogia raadiosondid (Met Aids); Raadiosagedusvahemikus 400,15 MHz kuni 406 MHz kasutamiseks mõeldud raadiosondid võimsusega kuni 200 mW; Raadiospektrile juurdepääsu harmoneeritud standard
EN 302 064	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM)Raadiosagedusvahemikus 1,3 GHz kuni 50 GHz töötavad juhtmeta

	videolingid (WVL) Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 302 065	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM)Sideks ultralairiba tehnoloogiat kasutavad lähitoimeseadmed, Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 066	Lähitoimeseadmed (SRD); Pinnase ja seina sondeerimisradarite rakendused; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 põhinõuete alusel
EN 302 077	Digitaalse raadioringhäälinguteenuse (T-DAB) raadiosaateseadmed; Harmoneeritud standard juurdepääsuks raadiospektrile
EN 302 152-1	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadiosagedusel 121,5 MHz või raadiosagedustel 121,5 MHz ja 243 MHz sihitamise eesmärgil töötavad avariipoid (EPIRB); Osa 1
EN 302 186	Kosmoseside maajaamad ja süsteemid (SES) Sagedusalades 11/12/14 GHz töötavate liikuva kosmoseside õhusõidukite maajaamade (AES) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 302 195	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadiosagedusalas 9 kHz kuni 315 kHz töötavad raadioseadmed väga väikese võimsusega aktiivsete meditsiiniliste implantaatide (ULP-AMI) ja nende lisatarvikute (ULP-AMI-P) jaoks Osa 2 Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel.
EN 302 208	Raadiosagedusalas 865 MHz kuni 868 MHz võimsusega kuni 2 W ja raadiosagedusalas 915 MHz kuni 921 MHz võimsusega kuni 4 W töötavad raadiosageduslikud identifitseerimisseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 põhinõuete alusel
EN 302 217-2	Paiksed raadiosüsteemid Raadioliinide seadmete ja antennide karakteristikud ja nõuded; Osa 2: Raadiosagedusalades 1,3 GHz kuni 86 GHz töötavad digitaalsüsteemid; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 302 248	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM)Navigatsiooniradarid SOLAS konventsiooniga hõlmamata laevadelHarmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 264	Lähitoimeseadmed; Transpordi ja liiklusetelemaatikasüsteemi seadmed (TTT); Sagedusalas 77 GHz kuni 81 GHz töötav sõidukiradar; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 põhinõuete alusel
EN 302 288-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed Maanteesidesüsteemi seadmed (RTTT) Sagedusalas 24 GHz töötavad sõidukiradarid Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 296	Maapealse digitaalse televisiooniringhäälingusüsteemi raadiosaateseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 302 326-2	Paiksed raadiosüsteemid; Paikse raadiovõrgu seadmed ja antennid; Osa 2: Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 302 326-3	Paiksed raadiosidesüsteemid Mitmikside seadmed ja antennid Osa 3: Mitmikpunktside raadioantennide harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 340	Kosmoseside maajaamad ja süsteemid (SES) Paiksele kosmosesidele (FSS) eraldatud raadiosagedusalades 11/12/14 GHz töötavate veesõidukitele paigaldatud kosmoseside maajaamade (ESV) põhinõuded, harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel

EN 302 372	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed Tuvastamis- ja liikumisandurid Raadiosagedusalades 5, 8, 10, 25, 61 ja 77 GHz töötavad mahutite taseme sondeerimisradarid (TLPR) Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
EN 302 435-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed (SRD) Ultralairiba (UWB) tehnoloogiat kasutavate lähitoimeseadmete tehnilised näitajad Raadiosagedusvahemikus 2,2 GHz kuni 8,5 GHz töötavad ehitusmaterjalide analüüsi ja klassifitseerimise rakendused Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 448	Kosmoseside maajaamad ja süsteemid (SES) Raadiosagedusalades 14/12 GHz töötavad rongidele jälgimiseks paigaldatud maajaamade harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 480	Electromagnetic compatibility and Radio spectrum Matters (ERM);Harmonized EN for the GSM onboard aircraft system covering the essential requirements of Article 3.2 of the R&TTE Directive
EN 302 498-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed (SRD) Ultralairiba (UWB) tehnoloogiat kasutavate lähitoimeseadmete tehnilised näitajad. Sagedusvahemikus 2,2 GHz kuni 8,5 GHz töötavate töövahendite objekti selektiivsuse ja näitajate rakendus Osa 2 harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 500-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Ultralairiba (UWB) tehnoloogiat kasutavad lähitoimeseadmed Raadiosagedusalas 6 GHz kuni 9 GHz töötavad asukohaotsingu seadmed Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 502	Lairiba raadiojuurdepääsuvõrgud (BRAN) Raadiosagedusalas 5,8 GHz töötavad paiksed lairiba andmeedastussüsteemid harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 510	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Raadiosagedusalas 30 MHz kuni 30,5 MHz töötavad väga väikese võimsusega aktiivsed meditsiinilised membraanimplantaadid ja nende lisatarvikud Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 536	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM). Lähitoimeseadmed (SRD). Raadiosagedusalas 315 kHz kuni 600 kHz töötavad seadmed. Osa 2: Harmoneeritud EN RjaTTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 537	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD). 402 MHz kuni 405 MHz ja 405 MHz kuni 406 MHz töötavad väga väikese võimsusega meditsiini andmesidesüsteemid; Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel.
EN 302 561	Liikuv maaside; Sageduskanalis laiusega 25 kHz,50 kHz,100 kHz või 150 kHz töötavad pidevat või vahelduvat mähisjoone modulatsiooni kasutavad raadioseadmed; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 302 567	Lairiba raadiojuurdepääsuvõrgud (BRAN).Raadiosagedusalas 60 GHz töötavad WAS/RLAN süsteemid. Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel

EN 302 571	Intelligentsed transpordisüsteemid (ITS); Sagedusvahemikus 5855 MHz kuni 5925 MHz töötavad raadioseadmed; Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 574-2	Kosmoseside maajaamad ja süsteemid (SES)Sagedusalades 1 980 MHz kuni 2 010 MHz (suunal Maa-kosmos) ja 2 170 MHz kuni 2 200 MHz (suunal kosmos-Maa) töötavate kosmoseside maajaamade (MSS) harmoneeritud standard Osa 2:Lairiba süsteemide kasutajaseadmed (UE). Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 574-3	Kosmoseside maajaamad ja süsteemid (SES)Sagedusalades 1 980 MHz kuni 2 010 MHz (suunal Maa-kosmos) ja 2 170 MHz kuni 2 200 MHz (suunal kosmos-Maa) töötavate kosmoseside maajaamade (MSS) harmoneeritud standard Osa 3: Kitsaribaliste süsteemide kasutajaseadmed (UE). Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 608	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed (SRD) Raudteesidesüsteemi Eurobalise raadioseadmed Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 609	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM) Lähitoimeseadmed (SRD) Raudteesidesüsteemi Euroloop raadioseadmed Harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 302 645	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD);Ülemaailmse kosmoseside navigatsioonisüsteemi (GNSS) repiiterid; Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 686	Intelligent Transport Systems (ITS); Radiocommunications equipment operating in the 63 GHz to 64 GHz frequency band; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive
EN 302 729	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD); Raadioagedusalalades 6 GHz kuni 8,5 GHz, 24,05 GHz kuni 26,5 GHz; 57 GHz kuni 64 GHz ja 75 GHz kuni 85 GHz töötavad taseme sondeerimisradarid (LPR); Osa 2:Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 põhinõuete alusel
EN 302 977	Kosmoseside maajaamad ja süsteemid (SES). Raadiosagedusalades 12/14 GHz töötavad liiklusvahenditele paigaldatud maajaamade (VMES) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 303 039	Liikuv maaside; PMR teenuse mitmekanalilise saatja spetsifikatsioon; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 303 084	Satelliitnavigatsiooni tugisüsteem (GBAS) VHF maa-õhk andmeedastus (VDB); Maapealsete seadmete tehnilised karakteristikud ja mõõtmismeetodid; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel
EN 303 203	Lähitoimeseadmed (SRD); Raadiosagedusalas 2483,5 MHz kuni 2500 MHz töötavad patsiendi keha meditsiinilised jälgimissüsteemid (MBANS); Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 303 213-1	Advanced Surface Movement Guidance and Control System (A-SMGCS); Part 1: Community Specification for A-SMGCS surveillance service including external interfaces
EN 303 213-6-1	Lennuvälja maapealse liikluse juhtimise täiustatud süsteem (A-SMGCS); Osa 6: Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 alusel

	süsteemi juures kasutatava maapealse liikluse seireradarite (SMR) jaoks; Alaosa 1: X-riba impulss-seireseadmed saatjavõimsusega kuni 100 kW
EN 303 405	Liikuv maaside; Analoog ja digital PMR446 seade; Harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel.
EN 303 520	Lähitoimeseadmed (SRD); Raadiosagedusalas 430 MHz kuni 440 MHz töötavad väga väikese võimsusega (ULP) juhtmevabad meditsiinilised kapselendoskoopia seadmed; Raadiospektri juurdepääsu harmoneeritud standard
EN 303 687	6 GHz RLAN; Raadiospektrile juurdepääsu harmoneeritud standard
EN 303 978	Kosmoseside maajaamad ja süsteemid (SES). Saatesagedusega 27,5 GHz kuni 30 GHz geostatsionaarorbiidil mobiilsel platvormil töötavate maajaamade (ESOMP) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 303 979	Kosmoseside maajaamad ja süsteemid (SES). Saatesagedustega 27,5 GHz kuni 29,1 GHz ja 29,5 GHz kuni 30 GHz mitte-geostatsionaarorbiidil mobiilsel platvormil töötavate maajaamade (ESOMP) harmoneeritud EN R&TTE direktiivi artikli 3.2 põhinõuete alusel
EN 303 980	Kosmoseside maajaamad ja süsteemid (SES); Saatesagedusel 11 GHz – 14 GHz mittegeostatsionaarorbiidil kosmoseside süsteemidega (NEST) suhtlevate statsionaarsete ja liikuvate maajaamade harmoneeritud standard direktiivi 2014/53/EL artikli 3.2 oluliste nõuete alusel
EN 305 550-2	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Lähitoimeseadmed (SRD). Raadioagedusalas 40 GHz kuni 246 GHz töötavad raadioseadmed. Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3 lõike 2 alusel.

XII. ETSI Raportid

ETSI TR 102 837	Electromagnetic compatibility and Radio spectrum Matters (ERM); System Reference Document;Broadband Wireless Systems in the 2 300 MHz to 2 400 MHz Range

XIII. COSPAS-SARSAT spetsifikatsioonid

C/S T.001	C/S T.001
C/S T.007	C/S T.007
C/S T.012	C/S T.012
C/S T.018	C/S T.018

XIV. CEPT ECC raportid

ECC Raport 025	Strategies for the European use of frequency spectrum for PMR/PAMR applications

XV. ITU raadioeeskirjade artikli 5 alamärkused

5.53	Administrations authorizing the use of frequencies below 8.3 kHz shall ensure that no harmful interference is caused to the services to which the bands above 8.3 kHz are allocated.(WRC-12)

5.54	Administrations conducting scientific research using frequencies below 8.3 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.
5.54A	Use of the 8.3–11.3 kHz frequency band by stations in the meteorological aids service is limited to passive use only. In the band 9–11.3 kHz, meteorological aids stations shall not claim protection from stations of the radionavigation service submitted for notification to the Bureau prior to 1 January 2013. For sharing between stations of the meteorological aids service and stations in the radionavigation service submitted for notification after this date, the most recent version of Recommendation ITU-R RS.1881 should be applied. (WRC-12)
5.54B	Additional allocation: in Algeria, Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Kuwait, Lebanon, Morocco, Qatar, the Syrian Arab Republic, Sudan and Tunisia, the frequency band 8.3–9 kHz is also allocated to the radionavigation, fixed and mobile services on a primary basis. (WRC-15)
5.55	Additional allocation: in Armenia, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the band 14–17 kHz is also allocated to the radionavigation service on a primary basis. (WRC-15)
5.56	The stations of services to which the bands 14–19.95 kHz and 20.05–70 kHz and in Region 1 also the bands 72–84 kHz and 86–90 kHz are allocated may transmit standard frequency and time signals. Such stations shall be afforded protection from harmful interference. In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions. (WRC-12)
5.57	The use of the bands 14–19.95 kHz, 20.05–70 kHz and 70–90 kHz (72–84 kHz and 86–90 kHz in Region 1) by the maritime mobile service is limited to coast radiotelegraph stations (A1A and F1B only). Exceptionally, the use of class J2B or J7B emissions is authorized subject to the necessary bandwidth not exceeding that normally used for class A1A or F1B emissions in the band concerned.
5.58	Additional allocation: in Armenia, Azerbaijan, the Russian Federation, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Turkmenistan, the band 67–70 kHz is also allocated to the radionavigation service on a primary basis. (WRC-2000)
5.60	In the bands 70–90 kHz (70–86 kHz in Region 1) and 110–130 kHz (112–130 kHz in Region 1), pulsed radionavigation systems may be used on condition that they do not cause harmful interference to other services to which these bands are allocated.
5.62	Administrations which operate stations in the radionavigation service in the band 90–110 kHz are urged to coordinate technical and operating characteristics in such a way as to avoid harmful interference to the services provided by these stations.
5.64	Only classes A1A or F1B, A2C, A3C, F1C or F3C emissions are authorized for stations of the fixed service in the bands allocated to this

	service between 90 kHz and 160 kHz (148.5 kHz in Region 1) and for stations of the maritime mobile service in the bands allocated to this service between 110 kHz and 160 kHz (148.5 kHz in Region 1). Exceptionally, class J2B or J7B emissions are also authorized in the bands between 110 kHz and 160 kHz (148.5 kHz in Region 1) for stations of the maritime mobile service.
5.67	Additional allocation: in Mongolia, Kyrgyzstan and Turkmenistan, 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-07)
5.67A	Stations in the amateur service using frequencies in the band 135.7–137.8 kHz shall not exceed a maximum radiated power of 1 W (e.i.r.p.) and shall not cause harmful interference to stations of the radionavigation service operating in countries listed in No. 5.67. (WRC-07)
5.73	The band 285–325 kHz (283.5–325 kHz in Region 1) in the maritime radionavigation service may be used to transmit supplementary navigational information using narrow-band techniques, on condition that no harmful interference is caused to radiobeacon stations operating in the radionavigation service. (WRC-97)
5.74	Additional Allocation: in Region 1, the frequency band 285.3–285.7 kHz is also allocated to the maritime radionavigation service (other than radiobeacons) on a primary basis.
5.75	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Moldova, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and the Black Sea areas of Romania, the allocation of the band 315–325 kHz to the maritime radionavigation service is on a primary basis under the condition that in the Baltic Sea area, the assignment of frequencies in this band to new stations in the maritime or aeronautical radionavigation services shall be subject to prior consultation between the administrations concerned. (WRC-07)
5.76	The frequency 410 kHz is designated for radio direction-finding in the maritime radionavigation service. The other radionavigation services to which the band 405–415 kHz is allocated shall not cause harmful interference to radio direction-finding in the band 406.5–413.5 kHz.
5.77	Different category of service: in Australia, China, the French overseas communities of Region 3, Korea (Rep. of), India, Iran (Islamic Republic of), Japan, Pakistan, Papua New Guinea, the Dem. People's Rep. of Korea and Sri Lanka, the allocation of the frequency band 415–495 kHz to the aeronautical radionavigation service is on a primary basis. In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Latvia, Uzbekistan and Kyrgyzstan, the allocation of the frequency band 435–495 kHz to the aeronautical radionavigation service is on a primary basis. Administrations in all the aforementioned countries shall take all practical steps necessary to ensure that aeronautical radionavigation stations in the frequency band 435–495 kHz do not cause interference to reception by coast stations of transmissions from ship stations on frequencies designated for ship stations on a worldwide basis. (WRC-19)

5.79	5.79 In the maritime mobile service, the frequency bands 415–495 kHz and 505–526.5 kHz are limited to radiotelegraphy and may also be used for the NAVDAT system in accordance with the most recent version of Recommendation ITU-R M.2010, subject to agreement between interested and affected administrations. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.79A	When establishing coast stations in the NAVTEX service on the frequencies 490 kHz, 518 kHz and 4 209.5 kHz, administrations are strongly recommended to coordinate the operating characteristics in accordance with the procedures of the International Maritime Organization (IMO) (see Resolution 339 (Rev.WRC-07). (WRC-07)
5.80	In Region 2, the use of the band 435–495 kHz by the aeronautical radionavigation service is limited to non-directional beacons not employing voice transmissioon.
5.80A	The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 472–479 kHz shall not exceed 1 W. Administrations may increase this limit of e.i.r.p. to 5 W in portions of their territory which are at a distance of over 800 km from the borders of Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iran (Islamic Republic of), Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia, Ukraine and Yemen. In this frequency band, stations in the amateur service shall not cause harmful interference to, or claim protection from, stations of the aeronautical radionavigation service.
5.80B	The use of the frequency band 472–479 kHz in Algeria, Saudi Arabia, Azerbaijan, Bahrain, Belarus, China, Comoros, Djibouti, Egypt, United Arab Emirates, the Russian Federation, Iraq, Jordan, Kazakhstan, Kuwait, Lebanon, Libya, Mauritania, Oman, Uzbekistan, Qatar, Syrian Arab Republic, Kyrgyzstan, Somalia, Sudan, Tunisia and Yemen is limited to the maritime mobile and aeronautical radionavigation services. The amateur service shall not be used in the above-mentioned countries in this frequency band, and this should be taken into account by the countries authorizing such use.
5.82	In the maritime mobile service, the frequency 490 kHz is to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles 31 and 52. In using the 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-12)
5.82C	The frequency band 495–505 kHz is used for the international NAVDAT system as described in the most recent version of Recommendation ITU-R M.2010. NAVDAT transmitting stations are limited to coast stations. (WRC-19)
5.84	The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles 31 and 52. (WRC-07)

5.90	In the band 1 605–1 705 kHz, in cases where a broadcasting station of Region 2 is concerned, the service area of the maritime mobile stations in Region 1 shall be limited to that provided by ground-wave propagation.
5.92	Some countries in Region 1 use radiodetermination systems in the bands 1606.5–1625 kHz, 1635–1800 kHz, 1850–2160 kHz, 2194–2300 kHz, 2502–2850 kHz and 3500–3800 kHz, subject to agreement obtained under No 9.21. The radiated mean power of these stations shall not exceed 50 W.
5.93	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency bands 1625–1635 kHz, 1800–1810 kHz and 2160–2170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. 9.21. (WRC-15)
5.96	In Germany, Armenia, Austria, Azerbaijan, Belarus, Croatia, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, administrations may allocate up to 200 kHz to their amateur service in the frequency bands 1715–1800 kHz and 1 850 2 000 kHz. However, when allocating the frequency bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W. (WRC-15)
5.98	Alternative allocation: in Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan and Turkey, the frequency band 1 810–1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-15)
5.100	In Region 1, the authorization to use the band 1810–1830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. 5.98 and 5.99 to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. 5.98 and 5.99.
5.103	In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1850–2045 kHz, 2194–2498 kHz, 2502–2625 kHz and 2650–2850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.
5.104	In Region 1, the use of the band 2025–2045 kHz by the meteorological aids service is limited to oceanographic buoy stations.

5.108	The carrier frequency 2182 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 31 and 52. (WRC-07)
5.109	The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article 31.
5.110	The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article 31.
5.111	The carrier frequencies 2182 kHz, 3023 kHz, 5680 kHz, 8364 kHz and the frequencies 121.5 MHz, 156.525 MHz, 156.8 MHz and 243 MHz may also be used, in accordance with the procedures in force for terrestrial radiocommunication services, for search and rescue operations concerning manned space vehicles. The conditions for the use of the frequencies are prescribed in Article 31. The same applies to the frequencies 10 003 kHz, 14 993 kHz and 19 993 kHz, but in each of these cases emissions must be confined in a band of ± 3 kHz about the frequency. (WRC 07)
5.113	For the conditions for the use of the bands 2 300–2 495 kHz (2 498 kHz in Region 1), 3 200–3 400 kHz, 4 750–4 995 kHz and 5 005–5 060 kHz by the broadcasting service, see Nos. 5.16 to 5.20, 5.21 and 23.3 to 23.10.
5.115	The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article 31 by stations of the maritime mobile service engaged in coordinated search and rescue operations. (WRC-07)
5.116	Administrations are urged to authorize the use of the band 3 155–3 195 kHz to provide a common worldwide channel for low power wireless hearing aids. Additional channels for these devices may be assigned by administrations in the bands between 3 155 kHz and 3 400 kHz to suit local needs. It should be noted that frequencies in the range 3 000 kHz to 4 000 kHz are suitable for hearing aid devices which are designed to operate over short distances within the induction field.
5.127	The use of the band 4 000–4 063 kHz by the maritime mobile service is limited to ship stations using radiotelephony (see No. 52.220 and Appendix 17).
5.128	Frequencies in the bands 4 063–4 123 kHz and 4 130–4 438 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W, on condition that harmful interference is not caused to the maritime mobile service. In addition, in Afghanistan, Argentina, Armenia, Belarus, Botswana, Burkina Faso, the Central African Rep., China, the Russian Federation, Georgia, India, Kazakhstan, Mali, Niger, Pakistan, Kyrgyzstan, Tajikistan, Chad, Turkmenistan and Ukraine, in the frequency bands 4 063–4 123 kHz, 4 130–4 133 kHz and 4 408–4 438 kHz, stations in the fixed service, with a mean power not exceeding 1 kW, can be operated on condition

	that they are situated at least 600 km from the coast and that harmful interference is not caused to the maritime mobile service. (WRC-19)
5.130	The conditions for the use of the carrier frequencies 4 125 kHz and 6 215 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.131	The frequency 4 209.5 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing techniques. (WRC-97)
5.132	The frequencies 4 210 kHz, 6 314 kHz, 8 416.5 kHz, 12 579 kHz, 16 806.5 kHz, 19 680.5 kHz, 22 376 kHz and 26 100.5 kHz are the international frequencies for the transmission of maritime safety information (MSI) (see Appendix 17).
5.132A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12).
5.132B	Alternative allocation: in Armenia, Austria, Belarus, Moldova, Uzbekistan and Kyrgyzstan, the frequency band 4 438–4 488 kHz is allocated to the fixed and mobile, except aeronautical mobile (R), services on a primary basis.
5.133	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Lithuania, Niger, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 5 130–5 250 kHz to the mobile, except aeronautical mobile, service is on a primary basis (see No. 5.33). (WRC-12)
5.133B	Stations in the amateur service using the frequency band 5 351.5–5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.). However, in Region 2 in Mexico, stations in the amateur service using the frequency band 5 351.5–5 366.5 kHz shall not exceed a maximum radiated power of 20 W (e.i.r.p.). In the following Region 2 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Dominica, El Salvador, Ecuador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela, as well as the overseas countries and territories within the Kingdom of the Netherlands in Region 2, stations in the amateur service using the frequency band 5 351.5–5 366.5 kHz shall not exceed a maximum radiated power of 25 W (e.i.r.p.). (WRC-19)
5.134	The use of the frequency bands 5 900–5 950 kHz, 7 300–7 350 kHz, 9 400–9 500 kHz, 11 600–11 650 kHz, 12 050–12 100 kHz, 13 570–13 600 kHz, 13 800–13 870 kHz, 15 600–15 800 kHz, 17 480–17 550 kHz and 18 900–19 020 kHz by the broadcasting service is subject to the application of the procedure of Article 12. Administrations are encouraged to use these frequency bands to facilitate the introduction of digitally modulated emissions in

	accordance with the provisions of Resolution 517 (Rev.WRC-19). (WRC-19)
5.136	Additional allocation: Frequencies in the band 5 900–5 950 kHz may be used by stations in the following services, communicating only within the boundary of the country in which they are located: fixed service (in all three Regions), land mobile service (in Region 1), mobile except aeronautical mobile (R) service (in Regions 2 and 3), on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.137	On condition that harmful interference is not caused to the maritime mobile service, the bands 6 200–6 213.5 kHz and 6 220.5–6 525 kHz may be used exceptionally by stations in the fixed service, communicating only within the boundary of the country in which they are located, with a mean power not exceeding 50 W. At the time of notification of these frequencies, the attention of the Bureau will be drawn to the above conditions.
5.138	The following bands: 6 765–6 795 kHz (centre frequency 6 780 kHz), 433.05–434.79 MHz (centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No. 5.280, 61–61.5 GHz (centre frequency 61.25 GHz), 122–123 GHz (centre frequency 122.5 GHz), and 244–246 GHz (centre frequency 245 GHz) are designated for industrial, scientific and medical (ISM) applications. The use of these frequency bands for ISM applications shall be subject to special authorisation by the administration concerned, in agreement with other administrations whose radiocommunication services might be affected. In applying this provision, administrations shall have due regard to the latest relevant ITU-R Recommendations.
5.143	Additional allocation: Frequencies in the band 7 300–7 350 kHz may be used by stations in the fixed service and in the land mobile service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.143B	In Region 1, frequencies in the band 7 350–7 450 kHz may be used by stations in the fixed and land mobile services communicating only within the boundary of the country in which they are located on condition that harmful interference is not caused to the broadcasting service. The total radiated power of each station shall not exceed 24 dBW. (WRC-12)
5.145	The conditions for the use of the carrier frequencies 8 291 kHz, 12 290 kHz and 16 420 kHz are prescribed in Articles 31 and 52. (WRC-07)
5.145A	Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed

	service. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with Resolution 612 (Rev.WRC-12).
5.146	Additional allocation: Frequencies in the bands 9 400–9 500 kHz, 11 600–11 650 kHz, 12 050–12 100 kHz, 15 600–15 800 kHz, 17 480–17 550 kHz and 18 900–19 020 kHz may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.147	On condition that harmful interference is not caused to the broadcasting service, frequencies in the bands 9 775–9 900 kHz, 11 650–11 700 kHz and 11 975–12 050 kHz may be used by stations in the fixed service communicating only within the boundary of the country in which they are located, each station using a total radiated power not exceeding 24 dBW.
5.149	In making assignments to stations of other services to which the bands: 13 360–13 410 kHz, 25 550–25 670 kHz, 37.5–38.25 MHz, 73–74.6 MHz In Regions 1 and 3, 150.05–153 MHz In Region 1, 322–328.6 MHz, 406.1–410 MHz, 608–614 MHz In Regions 1 and 3, 1 330–1 400 MHz, 1 610.6–1 613.8 MHz, 1 660–1 670 MHz, 1 718.8–1 722.2 MHz, 2 655–2 690 MHz, 3 260–3 267 MHz, 3 332–3 339 MHz, 3 345.8–3 352.5 MHz, 4 825–4 835 MHz, 4 950–4 990 MHz, 4 990–5 000 MHz, 6 650–6 675.2 MHz, 10.6–10.68 GHz, 14.47–14.5 GHz, 22.01–22.21 GHz, 22.21–22.5 GHz, 22.81–22.86 GHz, 23.07–23.12 GHz, 31.2–31.3 GHz, 31.5–31.8 GHz In Regions 1 and 3, 36.43–36.5 GHz, 42.5–43.5 GHz, 42.77–42.87 GHz, 43.07–43.17 GHz, 43.37–43.47 GHz, 48.94–49.04 GHz, 76–86 GHz, 92–94 GHz, 94.1–100 GHz, 102–109.5 GHz, 111.8–114.25 GHz, 128.33–128.59 GHz, 129.23–129.49 GHz, 130–134 GHz, 136–148.5 GHz, 151.5–158.5 GHz, 168.59–168.93 GHz, 171.11–171.45 GHz, 172.31–172.65 GHz, 173.52–173.85 GHz, 195.75–196.15 GHz, 209–226 GHz, 241–250 GHz, 252–275 GHz are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 4.5 and 4.6 and Article 29). (WRC-07)
5.150	The following bands: 13 553–13 567 kHz (centre frequency 13 560 kHz), 26 957–27 283 kHz (centre frequency 27 120 kHz), 40.66–40.70 MHz (centre frequency 40.68 MHz), 902–928 MHz in Region 2 (centre frequency 915 MHz), 2 400–2 500 MHz (centre frequency 2 450 MHz), 5 725–5 875 MHz (centre frequency 5 800 MHz), and 24–24.25 GHz (centre frequency 24.125 GHz) are also designated for industrial, scientific and medical (ISM) applications. Radiocommunication services operating within these bands must accept

	harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. 15.13.
5.151	Additional allocation: Frequencies in the bands 13 570–13 600 kHz and 13 800–13 870 kHz may be used by stations in the fixed service and in the mobile except aeronautical mobile (R) service, communicating only within the boundary of the country in which they are located, on the condition that harmful interference is not caused to the broadcasting service. When using frequencies in these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations. (WRC-07)
5.152	Additional allocation: in Armenia, Azerbaijan, China, C?te d'Ivoire, Georgia, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, the 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-03)
5.154	Additional allocation: in Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, the 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-03)
5.155	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the band 21 850–21 870 kHz is also allocated to the aeronautical mobile (R) service on a primary basis. (WRC-07)
5.155A	In Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Mongolia, Uzbekistan, Kyrgyzstan, Slovakia, Tajikistan, Turkmenistan and Ukraine, the use of the band 21 850–21 870 kHz by the fixed service is limited to provision of services related to aircraft flight safety. (WRC-07)
5.155B	The band 21 870–21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.
5.156A	The use of the band 23 200–23 350 kHz by the fixed service is limited to provision of services related to aircraft flight safety
5.157	The use of the band 23 350–24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.
5.161B	Alternative allocation: in Albania, Germany, Armenia, Austria, Belarus, Belgium, Bosnia and Herzegovina, Cyprus, Vatican, Croatia, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malta, Moldova, Monaco, Montenegro, Norway, Uzbekistan, Netherlands, Portugal, Kyrgyzstan, Slovakia, Czech Rep., Romania, United Kingdom, San Marino, Slovenia, Sweden, Switzerland, Turkey and Ukraine, the frequency band 42–42.5 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-19)

5.162A	Additional allocation: in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the frequency band 46–68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC-97). (WRC-19)
5.163	Additional allocation: in Armenia, Belarus, the Russian Federation, Georgia, Kazakhstan, Latvia, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency bands 47–48.5 MHz and 56.5–58 MHz are also allocated to the fixed and land mobile services on a secondary basis. (WRC-19)
5.164	Additional allocation: in Albania, Algeria, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Croatia, Denmark, Spain, Estonia, Eswatini, Finland, France, Gabon, Greece, Hungary, Ireland, Israel, Italy, Jordan, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Montenegro, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, Slovakia, Czech Rep., Romania, the United Kingdom, Serbia, Slovenia, Sweden, Switzerland, Chad, Togo, Tunisia and Turkey, the frequency band 47–68 MHz, in South Africa the frequency band 47–50 MHz, and in Latvia the frequency bands 48.5–56.5 MHz and 58–68 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each frequency band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the frequency band. (WRC-19)
5.166A	Different category of service: in Austria, Cyprus, the Vatican, Croatia, Denmark, Spain, Finland, Hungary, Latvia, the Netherlands, the Czech Republic, the United Kingdom, Slovakia and Slovenia, the frequency band 50.0–50.5 MHz is allocated to the amateur service on a primary basis. Stations in the amateur service in these countries shall not cause harmful interference to, or claim protection from, stations of the broadcasting, fixed and mobile services operating in accordance with the Radio Regulations in the frequency band 50.0–50.5 MHz in the countries not listed in this provision. For a station of these services, the protection criteria in No. 5.169B shall also apply. In Region 1, with the exception of those countries listed in No. 5.169, wind profiler radars operating in the radiolocation service under No. 5.162A are authorized to operate on the basis of equality with stations in the amateur service in the frequency band 50.0 50.5 MHz. (WRC-19)
5.166B	In Region 1, stations in the amateur service operating on a secondary basis shall not cause harmful interference to, or claim protection from, stations of the broadcasting service. The field strength generated by an amateur station in Region 1 in the frequency band 50–52 MHz shall not

	exceed a calculated value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the border of a country with operational analogue broadcasting stations in Region 1 and of neighbouring countries with broadcasting stations in Region 3 listed in Nos. 5.167 and 5.168. (WRC-19)
5.166C	In Region 1, stations in the amateur service in the frequency band 50–52 MHz, with the exception of those countries listed in No. 5.169, shall not cause harmful interference to, or claim protection from, wind profiler radars operating in the radiolocation service under No. 5.162A. (WRC-19)
5.166E	In the Russian Federation, only the frequency band 50.080 50.280 MHz is allocated to the amateur service on a secondary basis. The protection criteria for the other services in the countries not listed in this provision are specified in Nos. 5.166B and 5.169B. (WRC-19)
5.169B	Except countries listed under No. 5.169, stations in the amateur service used in Region 1, in all or part of the 50–54 MHz frequency band, shall not cause harmful interference to, or claim protection from, stations of other services used in accordance with the Radio Regulations in Algeria, Armenia, Azerbaijan, Belarus, Egypt, Russian Federation, Iran (Islamic Republic of), Iraq, Kazakhstan, Kyrgyzstan, Libya, Uzbekistan, Palestine*, the Syrian Arab Republic, Sudan, Tunisia and Ukraine. The field strength generated by an amateur station in the frequency band 50–54 MHz shall not exceed a value of +6 dB(μV/m) at a height of 10 m above ground for more than 10% of time along the borders of the countries listed in this provision. (WRC-19)
5.175	Alternative allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 68–73 MHz and 76–87.5 MHz are allocated to the broadcasting service on a primary basis. In Latvia and Lithuania, the bands 68–73 MHz and 76 87.5 MHz are allocated to the broadcasting and mobile, except aeronautical mobile, services on a primary basis. The services to which these bands are allocated in other countries and the broadcasting service in the countries listed above are subject to agreements with the neighbouring countries concerned. (WRC-07)
5.177	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the band 73–74 MHz is also allocated to the broadcasting service on a primary basis, subject to agreement obtained under No. 9.21. (WRC-07)
5.179	Additional allocation: in Armenia, Azerbaijan, Belarus, China, the Russian Federation, Georgia, Kazakhstan, Lithuania, Mongolia, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the bands 74.6–74.8 MHz and 75.2–75.4 MHz are also allocated to the aeronautical radionavigation service, on a primary basis, for ground-based transmitters only. (WRC-12)
5.180	The frequency 75 MHz is assigned to marker beacons. Administrations shall refrain from assigning frequencies close to the limits of the guardband to stations of other services which, because of their power or geographical position, might cause harmful interference or otherwise

	place a constraint on marker beacons. Every effort should be made to improve further the characteristics of airborne receivers and to limit the power of transmitting stations close to the limits 74.8 MHz and 75.2 MHz.
5.197A	Additional allocation: the band 108–117.975 MHz is also allocated on a primary basis to the aeronautical mobile (R) service, limited to systems operating in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 413 (Rev.WRC-07). The use of the band 108–112 MHz by the aeronautical mobile (R) service shall be limited to systems composed of ground-based transmitters and associated receivers that provide navigational information in support of air navigation functions in accordance with recognized international aeronautical standards. (WRC-07)
5.200	In the band 117.975–137 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article 31 for distress and safety purposes with stations of the aeronautical mobile service. (WRC-07)
5.201	Additional allocation: in Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq (Republic of), Japan, Kazakhstan, Mali, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency band 132–136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service. (WRC-19)
5.202	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bulgaria, the United Arab Emirates, the Russian Federation, Georgia, Iran (Islamic Republic of), Jordan, Mali, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, Senegal, Tajikistan, Turkmenistan and Ukraine, the frequency band 136–137 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service. (WRC-19)
5.203C	The use of the space operation service (space-to-Earth) with non-geostationary satellite short-duration mission systems in the frequency band 137–138 MHz is subject to Resolution 660 (WRC-19). Resolution 32 (WRC-19) applies. These systems shall not cause harmful interference to, or claim protection from, the existing services to which the frequency band is allocated on a primary basis. (WRC-19)
5.206	Different category of service: in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, Finland, France, Georgia, Greece, Kazakhstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, the

	Russian Federation, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137–138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. 5.33). (WRC-2000)
5.208	The use of the band 137–138 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-97)
5.208A	In making assignments to space stations in the mobile-satellite service in the frequency bands 137–138 MHz, 387–390 MHz and 400.15–401 MHz and in the maritime mobile-satellite service (space-to-Earth) in the frequency bands 157.1875–157.3375 MHz and 161.7875–161.9375 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the frequency bands 150.05–153 MHz, 322–328.6 MHz, 406.1–410 MHz and 608–614 MHz from harmful interference from unwanted emissions as shown in the most recent version of Recommendation ITU-R RA.769. (WRC-19)
5.208B	In the frequency bands: 137–138 MHz, 157.1875–157.3375 MHz, 161.7875–161.9375 MHz, 387–390 MHz, 400.15–401 MHz, 1 452–1 492 MHz, 1 525–1 610 MHz, 1 613.8–1 626.5 MHz, 2 655–2 690 MHz, 21.4–22 GHz, Resolution 739 (Rev.WRC-19) applies. (WRC-19)
5.209	The use of the bands 137–138 MHz, 148–150.05 MHz, 399.9–400.05 MHz, 400.15–401 MHz, 454–456 MHz and 459–460 MHz by the mobile-satellite service is limited to non-geostationary-satellite systems. (WRC-97)
5.209A	The use of the frequency band 137.175–137.825 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission in accordance with Appendix 4 is not subject to No. 9.11A. (WRC-19)
5.211	Additional allocation: in Germany, Saudi Arabia, Austria, Bahrain, Belgium, Denmark, the United Arab Emirates, Spain, Finland, Greece, Guinea, Ireland, Israel, Kenya, Kuwait, Lebanon, Liechtenstein, Luxembourg, North Macedonia, Mali, Malta, Montenegro, Norway, the Netherlands, Qatar, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sweden, Switzerland, Tanzania, Tunisia and Turkey, the frequency band 138–144 MHz is also allocated to the maritime mobile and land mobile services on a primary basis. (WRC-19)
5.218	Additional allocation: the band 148–149.9 MHz is also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. 9.21. The bandwidth of any individual transmission shall not exceed ± 25 kHz.
5.218A	The frequency band 148–149.9 MHz in the space operation service (Earth-to-space) may be used by non-geostationary-satellite systems with short-duration missions. Non-geostationary-satellite systems in the space operation service used for a short-duration mission in accordance with Resolution 32 (WRC-19) of the Radio Regulations are not subject to agreement under No. 9.21. At the stage of coordination, the provisions of Nos. 9.17 and 9.18 also apply. In the frequency band 148–149.9 MHz, non-geostationary-satellite systems with short-duration missions shall not cause unacceptable interference to, or claim protection from, existing primary services within this frequency band, or impose additional constraints on the space operation and mobile-satellite services. In addition, earth stations in non-geostationary-

	satellite systems in the space operation service with short-duration missions in the frequency band 148–149.9 MHz shall ensure that the power flux-density does not exceed −149 dB(W/(m^2 · 4 kHz)) for more than 1% of time at the border of the territory of the following countries: Armenia, Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, Russian Federation, India, Iran (Islamic Republic of), Japan, Kazakhstan, Malaysia, Uzbekistan, Kyrgyzstan, Thailand and Viet Nam. In case this power flux-density limit is exceeded, agreement under No. 9.21 is required to be obtained from countries mentioned in this footnote. (WRC-19)
5.219	The use of the frequency band 148–149.9 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. The mobile-satellite service shall not constrain the development and use of the fixed, mobile and space operation services in the frequency band 148–149.9 MHz. The use of the frequency band 148–149.9 MHz by non-geostationary-satellite systems in the space operation service identified as short-duration mission is not subject to No. 9.11A. (WRC-19)
5.220	The use of the frequency bands 149.9–150.05 MHz and 399.9–400.05 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. (WRC-15)
5.221	Stations of the mobile-satellite service in the frequency band 148–149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Djibouti, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Eswatini, Ethiopia, the Russian Federation, Finland, France, Gabon, Georgia, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, Montenegro, Mozambique, Namibia, Norway, New Zealand, Oman, Uganda, Uzbekistan, Pakistan, Panama, Papua New Guinea, Paraguay, the Netherlands, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Kyrgyzstan, Dem. People's Rep. of Korea, Slovakia, Romania, the United Kingdom, Senegal, Serbia, Sierra Leone, Singapore, Slovenia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia and Zimbabwe. (WRC-19)
5.225A	Additional allocation: in Algeria, Armenia, Azerbaijan, Belarus, China, the Russian Federation, France, Iran (Islamic Republic of), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Ukraine and Viet Nam, the frequency band 154–156 MHz is also allocated to the radiolocation service on a primary basis. The usage of the frequency band 154–156 MHz by the radiolocation service shall be limited to

	space-object detection systems operating from terrestrial locations. The operation of stations in the radiolocation service in the frequency band 154–156 MHz shall be subject to agreement obtained under No. 9.21. For the identification of potentially affected administrations in Region 1, the instantaneous field-strength value of 12 dB(?V/m) for 10% of the time produced at 10 m above ground level in the 25 kHz reference frequency band at the border of the territory of any other administration shall be used. For the identification of potentially affected administrations in Region 3, the interference-to-noise ratio (I/N) value of ?6 dB (N = ?161 dBW/4 kHz), or ?10 dB for applications with greater protection requirements, such as public protection and disaster relief (PPDR (N = ?161 dBW/4 kHz)), for 1% of the time produced at 60 m above ground level at the border of the territory of any other administration shall be used. In the frequency bands 156.7625–156.8375 MHz, 156.5125–156.5375 MHz, 161.9625–161.9875 MHz, 162.0125–162.0375 MHz, out-of-band e.i.r.p. of space surveillance radars shall not exceed –16 dBW. Frequency assignments to the radiolocation service under this allocation in Ukraine shall not be used without the agreement of Moldova.
5.226	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 and the band 156.7625–156.8375 MHz are contained in Article 31 and Appendix 18. The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC). The conditions for the use of this frequency and the band 156.4875–156.5625 MHz are contained in Articles 31 and 52, and in Appendix 18. In the bands 156–156.4875 MHz, 156.5625–156.7625 MHz, 156.8375–157.45 MHz, 160.6–160.975 MHz and 161.475–162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles 31 and 52, and Appendix 18). 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 frequencies 156.8 MHz and 156.525 MHz and the frequency bands in which priority is given to the maritime mobile service may be used for radiocommunications on inland waterways subject to agreement between interested and affected administrations and taking into account current frequency usage and existing agreements. (WRC-07)
5.227	Additional allocation: the bands 156.4875–156.5125 MHz and 156.5375–156.5625 MHz are also allocated to the fixed and land mobile services on a primary basis. The use of these bands by the fixed and land mobile services shall not cause harmful interference to nor claim protection from the maritime mobile VHF radiocommunication service. (WRC-07)
5.228	The use of the frequency bands 156.7625–156.7875 MHz and 156.8125–156.8375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system

	(AIS) emissions of long-range AIS broadcast messages (Message 27, see the most recent version of Recommendation ITU-R M.1371). With the exception of AIS emissions, emissions in these frequency bands by systems operating in the maritime mobile service for communications shall not exceed 1 W.
5.228A	The frequency bands 161.9625–161.9875 MHz and 162.0125–162.0375 MHz may be used by aircraft stations for the purpose of search and rescue operations and other safety-related communications.
5.228AA	The use of the frequency bands 161.9375–161.9625 MHz and 161.9875–162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18. (WRC-15)
5.228AB	The use of the frequency bands 157.1875–157.3375 MHz and 161.7875–161.9375 MHz by the maritime mobile-satellite service (Earth-to-space) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. (WRC-19)
5.228AC	The use of the frequency bands 157.1875–157.3375 MHz and 161.7875–161.9375 MHz by the maritime mobile-satellite service (space-to-Earth) is limited to non-geostationary-satellite systems operating in accordance with Appendix 18. Such use is subject to agreement obtained under No. 9.21 with respect to the terrestrial services in Azerbaijan, Belarus, China, Korea (Rep. of), Cuba, the Russian Federation, the Syrian Arab Republic, the Dem. People's Rep. of Korea, South Africa and Viet Nam. (WRC-19)
5.228B	The use of the frequency bands 161.9625–161.9875 MHz and 162.0125–162.0375 MHz by the fixed and land mobile services shall not cause harmful interference to, or claim protection from, the maritime mobile service.
5.228C	The use of the frequency bands 161.9625–161.9875 MHz and 162.0125–162.0375 MHz by the maritime mobile service and the mobile-satellite (Earth-to-space) service is limited to the automatic identification system (AIS). The use of these frequency bands by the aeronautical mobile (OR) service is limited to AIS emissions from search and rescue aircraft operations. The AIS operations in these frequency bands shall not constrain the development and use of the fixed and mobile services operating in the adjacent frequency bands.
5.228D	The frequency bands 161.9625–161.9875 MHz (AIS 1) and 162.0125–162.0375 MHz (AIS 2) may continue to be used by the fixed and mobile services on a primary basis until 1 January 2025, at which time this allocation shall no longer be valid. Administrations are encouraged to make all practicable efforts to discontinue the use of these bands by the fixed and mobile services prior to the transition date. During this transition period, the maritime mobile service in these frequency bands has priority over the fixed, land mobile and aeronautical mobile services.
5.228E	The use of the automatic identification system in the frequency bands 161.9625–161.9875 MHz and 162.0125–162.0375 MHz by the aeronautical mobile (OR) service is limited to aircraft stations for the purpose of search and rescue operations and other safety-related communications.

5.228F	The use of the frequency bands 161.9625–161.9875 MHz and 162.0125–162.0375 MHz by the mobile-satellite service (Earth-to-space) is limited to the reception of automatic identification system emissions from stations operating in the maritime mobile service.
5.235	Additional allocation: in Germany, Austria, Belgium, Denmark, Spain, Finland, France, Israel, Italy, Liechtenstein, Malta, Monaco, Norway, the Netherlands, the United Kingdom, Sweden and Switzerland, the band 174–223 MHz is also allocated to the land mobile service on a primary basis. However, the stations of the land mobile service shall not cause harmful interference to, or claim protection from, broadcasting stations, existing or planned, in countries other than those listed in this footnote.
5.254	The bands 235–322 MHz and 335.4–399.9 MHz may be used by the mobile-satellite service, subject to agreement obtained under No. 9.21, on condition that stations in this service do not cause harmful interference to those of other services operating or planned to be operated in accordance with the Table of Frequency Allocations except for the additional allocation made in footnote No. 5.256A. (WRC-03)
5.255	The bands 312–315 MHz (Earth-to-space) and 387–390 MHz (space-to-Earth) in the mobile-satellite service may also be used by non-geostationary-satellite systems. Such use is subject to coordination under No. 9.11A.
5.256	The frequency 243 MHz is the frequency in this band for use by survival craft stations and equipment used for survival purposes. (WRC-07)
5.256A	Additional allocation: in China, the Russian Federation and Kazakhstan, the frequency band 258–261 MHz is also allocated to the space research service (Earth-to-space) and space operation service (Earth-to-space) on a primary basis. Stations in the space research service (Earth-to-space) and space operation service (Earth-to-space) shall not cause harmful interference to, or claim protection from, or constrain the use and development of, the mobile service systems and mobile-satellite service systems operating in the frequency band. Stations in space research service (Earth-to-space) and space operation service (Earth-to-space) shall not constrain the future development of fixed service systems of other countries. (WRC-15)
5.257	The band 267–272 MHz may be used by administrations for space telemetry in their countries on a primary basis, subject to agreement obtained under No. 9.21.
5.258	The use of the band 328.6–335.4 MHz by the aeronautical radionavigation service is limited to Instrument Landing Systems (glide path).
5.259	Additional allocation: in Egypt and the Syrian Arab Republic, the band 328.6–335.4 MHz is also allocated to the mobile service on a secondary basis, subject to agreement obtained under No. 9.21. In order to ensure that harmful interference is not caused to stations of the aeronautical radionavigation service, stations of the mobile service shall not be introduced in the band until it is no longer required for the aeronautical radionavigation service by any administration which may be identified in the application of the procedure invoked under No. 9.21. (WRC-12)

5.260A	In the frequency band 399.9–400.05 MHz, the maximum e.i.r.p. of any emission of earth stations in the mobile-satellite service shall not exceed 5 dBW in any 4 kHz band and the maximum e.i.r.p. of each earth station in the mobile-satellite service shall not exceed 5 dBW in the whole 399.9–400.05 MHz frequency band. Until 22 November 2022, this limit shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2022, these limits shall apply to all systems within the mobile-satellite service operating in this frequency band. In the frequency band 399.99–400.02 MHz, the e.i.r.p. limits as specified above shall apply after 22 November 2022 to all systems within the mobile-satellite service. Administrations are requested that their mobile-satellite service satellite links in the 399.99–400.02 MHz frequency band comply with the e.i.r.p. limits as specified above, after 22 November 2019. (WRC-19)
5.260B	In the frequency band 400.02–400.05 MHz, the provisions of No. 5.260A are not applicable for telecommand uplinks within the mobile-satellite service. (WRC-19)
5.261	Emissions shall be confined in a band of ± 25 kHz about the standard frequency 400.1 MHz.
5.262	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Botswana, Colombia, Cuba, Egypt, the United Arab Emirates, Ecuador, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kazakhstan, Kuwait, Liberia, Malaysia, Moldova, Oman, Uzbekistan, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Kyrgyzstan, Singapore, Somalia, Tajikistan, Chad, Turkmenistan and Ukraine, the band 400.05 401 MHz is also allocated to the fixed and mobile services on a primary basis. (WRC-12)
5.263	The band 400.15–401 MHz is also allocated to the space research service in the space-to-space direction for communications with manned space vehicles. In this application, the space research service will not be regarded as a safety service.
5.264	The use of the band 400.15–401 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. The power flux-density limit indicated in Annex 1 of Appendix 5 shall apply until such time as a competent world radiocommunication conference revises it.
5.264A	In the frequency band 401–403 MHz, the maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW in any 4 kHz band for geostationary-satellite systems and non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km. The maximum e.i.r.p. of any emission of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW in any 4 kHz band for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km. The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 22 dBW for geostationary-satellite systems and

	non-geostationary-satellite systems with an orbit of apogee equal or greater than 35 786 km in the whole 401–403 MHz frequency band. The maximum e.i.r.p. of each earth station in the meteorological-satellite service and the Earth exploration-satellite service shall not exceed 7 dBW for non-geostationary-satellite systems with an orbit of apogee lower than 35 786 km in the whole 401–403 MHz frequency band. Until 22 November 2029, these limits shall not apply to satellite systems for which complete notification information has been received by the Radiocommunication Bureau by 22 November 2019 and that have been brought into use by that date. After 22 November 2029, these limits shall apply to all systems within the meteorological-satellite service and the Earth exploration-satellite service operating in this frequency band. (WRC-19)
5.264B	Non-geostationary-satellite systems in the meteorological-satellite service and the Earth exploration-satellite service for which complete notification information has been received by the Radiocommunication Bureau before 28 April 2007 are exempt from provisions of No. 5.264A and may continue to operate in the frequency band 401.898–402.522 MHz on a primary basis without exceeding a maximum e.i.r.p. level of 12 dBW. (WRC-19)
5.265	In the frequency band 403–410 MHz, Resolution 205 (Rev.WRC-19) applies. (WRC-19)
5.266	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 31). (WRC-07)
5.267	Any emission capable of causing harmful interference to the authorised uses of the band 406–406.1 MHz is prohibited.
5.268	Use of the frequency band 410–420 MHz by the space research service is limited to space-to-space communication links with an orbiting, manned space vehicle. The power flux-density at the surface of the Earth produced by emissions from transmitting stations of the space research service (space-to-space) in the frequency band 410-420 MHz shall not exceed −153 dB(W/m2) for $0° \leq \delta \leq 5°$, $-153 + 0.077 (\delta - 5)$ dB(W/m2) for $5° \leq \delta \leq 70°$ and −148 dB(W/m2) for $70° \leq \delta \leq 90°$, where δ is the angle of arrival of the radio-frequency wave and the reference bandwidth is 4 kHz. In this frequency band, stations of the space research service (space-to-space) shall not claim protection from, nor constrain the use and development of, stations of the fixed and mobile services. No. 4.10 does not apply. (WRC-15)
5.271	Additional allocation: in Belarus, China, India, Kyrgyzstan and Turkmenistan, the band 420 460 MHz is also allocated to the aeronautical radionavigation service (radio altimeters) on a secondary basis. (WRC-07)
5.274	Alternative allocation: in Denmark, Norway, Sweden and Chad, the bands 430–432 MHz and 438 440 MHz are allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.275	AAdditional allocation: in Croatia, Estonia, Finland, Libya, North Macedonia, Montenegro and Serbia, the frequency bands 430–432 MHz

	and 438–440 MHz are also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-19)
5.277	Additional allocation: in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo (Rep. of the), Djibouti, the Russian Federation, Georgia, Hungary, Israel, Kazakhstan, Mali, Uzbekistan, Poland, the Dem. Rep. of the Congo, Kyrgyzstan, Slovakia, Romania, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the frequency band 430–440 MHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.279A	The use of the frequency band 432–438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU R RS.1260-2. Additionally, the Earth exploration-satellite service (active) in the frequency band 432–438 MHz shall not cause harmful interference to the aeronautical radionavigation service in China. The provisions of this footnote in no way diminish the obligation of the Earth exploration-satellite service (active) to operate as a secondary service in accordance with Nos. 5.29 and 5.30. (WRC-19)
5.282	In the bands 435–438 MHz, 1 260–1 270 MHz, 2 400–2 450 MHz, 3 400–3 410 MHz (in Regions 2 and 3 only) and 5 650–5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. 5.43). Administrations authorising such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. 25.11. The use of the bands 1 260–1 270 MHz and 5 650–5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.
5.286	The band 449.75–450.25 MHz may be used for the space operation service (Earth-to-space) and the space research service (Earth-to-space), subject to agreement obtained under No. 9.21.
5.286A	The use of the bands 454–456 MHz and 459–460 MHz by the mobile-satellite service is subject to coordination under 9.11A. (WRC-97)
5.286AA	The frequency band 450–470 MHz is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) - see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.287	Use of the frequency bands 457.5125–457.5875 MHz and 467.5125–467.5875 MHz by the maritime mobile service is limited to on-board communication stations. The characteristics of the equipment and the channelling arrangement shall be in accordance with Recommendation ITU R M.1174 4. The use of these frequency bands in territorial waters is subject to the national regulations of the administration concerned. (WRC-19)
5.289	Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460–470 MHz and 1 690–1 710 MHz for space-to-Earth transmissions subject to

	not causing harmful interference to stations operating in accordance with the Table.
5.290	Different category of service: in Afghanistan, Azerbaijan, Belarus, China, the Russian Federation, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 460–470 MHz to the meteorological-satellite service (space-to Earth) is on a primary basis (see No. 5.33), subject to agreement obtained under No. 9.21. (WRC-12)
5.291A	Additional allocation: in Germany, Austria, Denmark, Estonia, Liechtenstein, the Czech Rep., Serbia and Switzerland, the frequency band 470–494 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution 217 (WRC 97). (WRC-15)
5.296	Additional allocation: in Albania, Germany, Angola, Saudi Arabia, Austria, Bahrain, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Vatican, Congo (Rep. of the), Côte d'Ivoire, Croatia, Denmark, Djibouti, Egypt, United Arab Emirates, Spain, Estonia, Eswatini, Finland, France, Gabon, Georgia, Ghana, Hungary, Iraq, Ireland, Iceland, Israel, Italy, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Malawi, Mali, Malta, Morocco, Mauritius, Mauritania, Moldova, Monaco, Mozambique, Namibia, Niger, Nigeria, Norway, Oman, Uganda, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the Czech Republic, Romania, the United Kingdom, Rwanda, San Marino, Serbia, Sudan, South Africa, Sweden, Switzerland, Tanzania, Chad, Togo, Tunisia, Turkey, Ukraine, Zambia and Zimbabwe, the frequency band 470–694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme making. Stations of the land mobile service in the countries listed in this footnote shall not cause harmful interference to existing or planned stations operating in accordance with the Table in countries other than those listed in this footnote. (WRC-19)
5.306	Additional allocation: in Region 1, except in the African Broadcasting Area (see Nos. 5.10 to 5.13), and in Region 3, the band 608–614 MHz is also allocated to the radio astronomy service on a secondary basis.
5.312	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 645–862 MHz, and in Bulgaria the frequency bands 646–686 MHz, 726–753 MHz, 778–811 MHz and 822–852 MHz, are also allocated to the aeronautical radionavigation service on a primary basis. (WRC-19)
5.312A	In Region 1, the use of the frequency band 694–790 MHz by the mobile, except aeronautical mobile, service is subject to the provisions of Resolution 760 (Rev.WRC-19). See also Resolution 224 (Rev.WRC-19). (WRC-19)
5.316B	In Region 1, the allocation to the mobile, except aeronautical mobile, service in the frequency band 790 862 MHz is subject to agreement obtained under No. 9.21 with respect to the aeronautical radionavigation service in countries mentioned in No. 5.312. For

	countries party to the GE06 Agreement, the use of stations of the mobile service is also subject to the successful application of the procedures of that Agreement. Resolutions 224 (Rev.WRC-19) and 749 (Rev.WRC-19) shall apply, as appropriate. (WRC-19)
5.317A	The parts of the frequency band 698–960 MHz in Region 2 and the frequency bands 694–790 MHz in Region 1 and 790–960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolutions 224 (Rev.WRC-19), 760 (Rev.WRC-19) and 749 (Rev.WRC-19), where applicable. This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-19)
5.319	Additional Allocation: In Belarus, the Russian Federation and Ukraine, the bands 806–840 MHz (Earth-to-space) and 856–890 MHz (space-to-Earth) are also allocated to the mobile-satellite, except aeronautical mobile satellite (R), service. The use of these bands by this service shall not cause harmful interference to, or claim protection from, services in other countries operating in accordance with the Table of Frequency Allocations and is subject to special agreements between the administrations concerned.
5.323	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 862–960 MHz, in Bulgaria the frequency bands 862–880 MHz and 915–925 MHz, and in Romania the frequency bands 862–880 MHz and 915–925 MHz, are also allocated to the aeronautical radionavigation service on a primary basis. Such use is subject to agreement obtained under No. 9.21 with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime. (WRC-19)
5.327A	The use of the frequency band 960–1 164 MHz by the aeronautical mobile (R) service is limited to systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 417 (Rev.WRC-15). (WRC-15)
5.328	The use of the band 960–1 215 MHz by the aeronautical radionavigation service is reserved on a worldwide basis for the operation and development of airborne electronic aids to air navigation and any directly associated ground-based facilities. (WRC-2000)
5.328A	Stations in the radionavigation-satellite service in the band 1 164–1 215 MHz shall operate in accordance with the provisions of Resolution 609 (Rev.WRC-07) and shall not claim protection from stations in the aeronautical radionavigation service in the band 960–1 215 MHz. No. 5.43A does not apply. The provisions of No. 21.18 shall apply. (WRC-07)
5.328AA	The frequency band 1 087.7–1 092.3 MHz is also allocated to the aeronautical mobile-satellite (R) service (Earth to space) on a primary basis, limited to the space station reception of Automatic Dependent Surveillance-Broadcast (ADS B) emissions from aircraft transmitters that operate in accordance with recognized international aeronautical

	standards. Stations operating in the aeronautical mobile-satellite (R) service shall not claim protection from stations operating in the aeronautical radionavigation service. Resolution 425 (Rev.WRC-19) shall apply. (WRC-19)
5.328B	The use of the bands 1 164–1 300 MHz, 1 559–1 610 MHz and 5 010–5 030 MHz by systems and networks in the radionavigation-satellite service for which complete coordination or notification information, as appropriate, is received by the Radiocommunication Bureau after 1 January 2005 is subject to the application of the provisions of Nos. 9.12, 9.12A and 9.13. Resolution 610 (WRC-03) shall also apply; however, in the case of radionavigation-satellite service (space-to-space) networks and systems, Resolution 610 (WRC-03) shall only apply to transmitting space stations. In accordance with No. 5.329A, for systems and networks in the radionavigation-satellite service (space-to-space) in the bands 1 215–1 300 MHz and 1 559–1 610 MHz, the provisions of Nos. 9.7, 9.12, 9.12A and 9.13 shall only apply with respect to other systems and networks in the radionavigation-satellite service (space-to-space). (WRC-07)
5.329	UUse of the radionavigation-satellite service in the frequency band 1 215–1 300 MHz shall be subject to the condition that no harmful interference is caused to, and no protection is claimed from, the radionavigation service authorized under No. 5.331. Furthermore, the use of the radionavigation-satellite service in the frequency band 1 215–1 300 MHz shall be subject to the condition that no harmful interference is caused to the radiolocation service. No. 5.43 shall not apply in respect of the radiolocation service. Resolution 608 (Rev.WRC-19) shall apply. (WRC-19)
5.329A	Use of systems in the radionavigation-satellite service (space-to-space) operating in the bands 1 215–1 300 MHz and 1 559–1 610 MHz is not intended to provide safety service applications, and shall not impose any additional constraints on radionavigation-satellite service (space-to-Earth) systems or on other services operating in accordance with the Table of Frequency Allocations. (WRC-07)
5.331	Additional allocation: in Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Belarus, Belgium, Benin, Bosnia and Herzegovina, Brazil, Burkina Faso, Burundi, Cameroon, China, Korea (Rep. of), Croatia, Denmark, Egypt, the United Arab Emirates, Estonia, the Russian Federation, Finland, France, Ghana, Greece, Guinea, Equatorial Guinea, Hungary, India, Indonesia, Iran (Islamic Republic of), Iraq, Ireland, Israel, Jordan, Kenya, Kuwait, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, North Macedonia, Madagascar, Mali, Mauritania, Montenegro, Nigeria, Norway, Oman, Pakistan, the Kingdom of the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the United Kingdom, Serbia, Slovenia, Somalia, Sudan, South Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the frequency band 1 215 1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the frequency band 1 240–1 300 MHz is also allocated to the radionavigation service and use of the radionavigation

	service shall be limited to the aeronautical radionavigation service. (WRC-19)
5.332	In the band 1 215–1 260 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service, the radionavigation-satellite service and other services allocated on a primary basis. (WRC-2000)
5.335A	In the band 1 260–1 300 MHz, active spaceborne sensors in the Earth exploration-satellite and space research services shall not cause harmful interference to, claim protection from, or otherwise impose constraints on operation or development of the radiolocation service and other services allocated by footnotes on a primary basis.(WRC-2000)
5.337	The use of the bands 1 300–1 350 MHz, 2 700–2 900 MHz and 9 000–9 200 MHz by the aeronautical radionavigation service is restricted to ground-based radars and to associated airborne transponders which transmit only on frequencies in these bands and only when actuated by radars operating in the same band.
5.337A	The use of the band 1 300–1 350 MHz by earth stations in the radionavigation-satellite service and by stations in the radiolocation service shall not cause harmful interference to, nor constrain the operation and development of, the aeronautical-radionavigation service. (WRC-2000)
5.338A	In the frequency bands 1 350–1 400 MHz, 1 427–1 452 MHz, 22.55–23.55 GHz, 24.25–27.5 GHz, 30–31.3 GHz, 49.7–50.2 GHz, 50.4–50.9 GHz, 51.4–52.4 GHz, 52.4–52.6 GHz, 81–86 GHz and 92–94 GHz, Resolution 750 (Rev.WRC-19) applies. (WRC-19)
5.339	The bands 1 370–1 400 MHz, 2 640–2 655 MHz, 4 950–4 990 MHz and 15.20–15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.
5.340	All emissions are prohibited in the following bands: 1 400–1 427 MHz, 2 690–2 700 MHz, except those provided for by No. 5.422, 10.68–10.7 GHz, except those provided for by No. 5.483, 15.35–15.4 GHz, except those provided for by No. 5.511, 23.6–24 GHz, 31.3–31.5 GHz, 31.5–31.8 GHz, in Region 2, 48.94–49.04 GHz, from airborne stations, 50.2–50.4 GHz, 52.6–54.25 GHz, 86–92 GHz, 100–102 GHz, 109.5–111.8 GHz, 114.25–116 GHz, 148.5–151.5 GHz, 164–167 GHz, 182–185 GHz, 190–191.8 GHz, 200–209 GHz, 226–231.5 GHz, 250–252 GHz. (WRC-03)
5.341	In the bands 1 400–1 727 MHz, 101–120 GHz and 197–220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin
5.341A	In Region 1, the frequency bands 1 427–1 452 MHz and 1 492–1 518 MHz are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15). This identification does not preclude the use of these frequency bands by any other application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with respect to the aeronautical mobile service

	used for aeronautical telemetry in accordance with No. 5.342. (WRC-15)
5.342	Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Uzbekistan, Kyrgyzstan and Ukraine, the frequency band 1 429–1 535 MHz is also allocated to the aeronautical mobile service on a primary basis, exclusively for the purposes of aeronautical telemetry within the national territory. As of 1 April 2007, the use of the frequency band 1 452–1 492 MHz is subject to agreement between the administrations concerned. (WRC-15)
5.345	Use of the frequency band 1 452–1 492 MHz by the broadcasting-satellite service, and by the broadcasting service, is limited to digital audio broadcasting and is subject to the provisions of Resolution 528 (Rev.WRC-19). (WRC-19)
5.348	The use of the band 1 518–1 525 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the band 1 518–1 525 MHz stations in the mobile-satellite service shall not claim protection from the stations in the fixed service. No. 5.43A does not apply. (WRC-03)
5.351	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 authorised by an administration to communicate via space stations using these bands.
5.351A	For the use of the bands 1 518–1 544 MHz, 1 545–1 559 MHz, 1 610–1 626.5 MHz, 1 626.5–1 645.5 MHz, 1 646.5–1 660.5 MHz, 1 668–1 675 MHz, 1 980–2 010 MHz, 2 170–2 200 MHz, 2 483.5–2 500 MHz, 2 500–2 520 MHz and 2 670–2 690 MHz by the mobile-satellite service, see Resolutions 212 (Rev.WRC-07) and 225 (Rev.WRC-07). (WRC-07)
5.353A	In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 530–1 544 MHz and 1 626.5–1 645.5 MHz, priority shall be given to accommodating the spectrum requirements for distress, urgency and safety communications of the Global Maritime Distress and Safety System (GMDSS). Maritime mobile-satellite distress, urgency and safety communications shall have priority access and immediate availability over all other mobile satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, distress, urgency and safety communications of the GMDSS. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (WRC-2000)* shall apply.) (WRC 2000) *Note by the Secretariat: This Resolution was revised by WRC-07
5.354	The use of the bands 1 525–1 559 MHz and 1 626.5–1 660.5 MHz by the mobile-satellite services is subject to coordination under 9.11A.
5.356	The use of the band 1 544–1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article 31).
5.357	Transmissions in the band 1 545–1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft

	stations, in the aeronautical mobile (R) service are also authorised when such transmissions are used to extend or supplement the satellite-to-aircraft links.
5.357A	In applying the procedures of Section II of Article 9 to the mobile-satellite service in the bands 1 545–1 555 MHz and 1 646.5–1 656.5 MHz, priority shall be given to accommodating the spectrum requirements of the aeronautical mobile-satellite (R) service providing transmission of messages with priority 1 to 6 in Article 44. Aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44 shall have priority access and immediate availability, by pre-emption if necessary, over all other mobile-satellite communications operating within a network. Mobile-satellite systems shall not cause unacceptable interference to, or claim protection from, aeronautical mobile-satellite (R) service communications with priority 1 to 6 in Article 44. Account shall be taken of the priority of safety-related communications in the other mobile-satellite services. (The provisions of Resolution 222 (Rev. WRC-12) shall apply.) (WRC-12)
5.359	Additional allocation: in Germany, Saudi Arabia, Armenia, Azerbaijan, Belarus, Cameroon, the Russian Federation, Georgia, Guinea, Guinea-Bissau, Jordan, Kazakhstan, Kuwait, Lithuania, Mauritania, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Tajikistan, Tunisia, Turkmenistan and Ukraine, the frequency bands 1 550–1 559 MHz, 1 610–1 645.5 MHz and 1 646.5–1 660 MHz are also allocated to the fixed service on a primary basis. Administrations are urged to make all practicable efforts to avoid the implementation of new fixed-service stations in these frequency bands. (WRC-19)
5.364	The use of the band 1 610–1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination satellite service (Earth-to-space) is subject to coordination under No. 9.11A. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of –15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. 5.366 (to which No. 4.10 applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed –3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. 5.366 and stations in the fixed service operating in accordance with the provisions of No. 5.359. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. 5.366.
5.365	The use of the band 1 613.8–1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under 9.11A.
5.366	The band 1 610–1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. 9.21.

5.367	Additional allocation: the bands 1 610–1 626.5 MHz is also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. 9.2
5.368	The provisions of No. 4.10 do not apply with respect to the radiodetermination-satellite and mobile-satellite services in the frequency band 1 610–1 626.5 MHz. However, No. 4.10 applies in the frequency band 1 610–1 626.5 MHz with respect to the aeronautical radionavigation-satellite service when operating in accordance with No. 5.366, the aeronautical mobile satellite (R) service when operating in accordance with No. 5.367, and in the frequency band 1 621.35–1 626.5 MHz with respect to the maritime mobile-satellite service when used for GMDSS. (WRC-19)
5.371	Additional allocation: in Region 1, the bands 1 610–1 626.5 MHz (Earth-to-space) is also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. 9.21. (WRC-12)
5.372	Harmful interference shall not be caused to stations of the radio astronomy service using the frequency band 1 610.6–1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. 29.13 applies). The equivalent power flux-density (epfd) produced in the frequency band 1 610.6–1 613.8 MHz by all space stations of a non-geostationary-satellite system in the mobile-satellite service (space-to-Earth) operating in frequency band 1 613.8–1 626.5 MHz shall be in compliance with the protection criteria provided in Recommendations ITU R RA.769 2 and ITU R RA.1513 2, using the methodology given in Recommendation ITU R M.1583 1, and the radio astronomy antenna pattern described in Recommendation ITU R RA.1631 0. (WRC-19)
5.373	Maritime mobile earth stations receiving in the frequency band 1 621.35–1 626.5 MHz shall not impose additional constraints on earth stations operating in the maritime mobile-satellite service or maritime earth stations of the radiodetermination-satellite service operating in accordance with the Radio Regulations in the frequency band 1 610–1 621.35 MHz or on earth stations operating in the maritime mobile-satellite service operating in accordance with the Radio Regulations in the frequency band 1 626.5–1 660.5 MHz, unless otherwise agreed between the notifying administrations. (WRC-19)
5.373A	Maritime mobile earth stations receiving in the frequency band 1 621.35–1 626.5 MHz shall not impose constraints on the assignments of earth stations of the mobile-satellite service (Earth-to-space) and the radiodetermination-satellite service (Earth-to-space) in the frequency band 1 621.35–1 626.5 MHz in networks for which complete coordination information has been received by the Radiocommunication Bureau before 28 October 2019. (WRC-19)
5.374	Mobile earth stations in the mobile-satellite service operating in the bands 1 631.5–1 634.5 MHz and 1 656.5–1 660 MHz shall not cause harmful interference to the stations in the fixed service operating in the countries listed in No. 5.359. (WRC-97)

5.375	The use of the band 1 645.5–1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article 31).
5.376	Transmissions in the band 1 646.5–1 656.5 MHz from aircraft stations in the aeronautical mobile (R) service directly to terrestrial aeronautical stations, or between aircraft stations, are also authorised when such transmissions are used to extend or supplement the aircraft-to-satellite links.
5.376A	Mobile earth stations operating in the band 1 660–1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service. (WRC-97)
5.379A	Administrations are urged to give all practicable protection in the band 1 660.5–1 668.4 MHz for future research in radio astronomy, particularly by eliminating air-to-ground transmissions in the meteorological aids service in the band 1 664.4–1 668.4 MHz as soon as practicable.
5.379B	The use of the band 1 668–1 675 MHz by the mobile-satellite service is subject to coordination under No. 9.11A. In the band 1 668–1 668.4 MHz, Resolution 904 (WRC-07) shall apply. (WRC 07)
5.379C	In order to protect the radio astronomy service in the band 1 668–1 670 MHz, the aggregate power flux-density values produced by mobile earth stations in a network of the mobile-satellite service operating in this band shall not exceed –181 dB(W/m2) in 10 MHz and 194dB(W/m2) in any 20 kHz at any radio astronomy station recorded in the Master International Frequency Register, for more than 2% of integration periods of 2 000 s. (WRC-03)
5.379D	For sharing of the band 1 668.4–1 675 MHz between the mobile-satellite service and the fixed and mobile services, Resolution 744 (Rev.WRC-07) shall apply. (WRC-07)
5.379E	In the band 1 668.4–1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to stations in the meteorological aids service in China, Iran (Islamic Republic of), Japan and Uzbekistan. In the band 1 668.4–1 675 MHz, administrations are urged not to implement new systems in the meteorological aids service and are encouraged to migrate existing meteorological aids service operations to other bands as soon as practicable. (WRC-03)
5.380A	In the band 1 670–1 675 MHz, stations in the mobile-satellite service shall not cause harmful interference to, nor constrain the development of, existing earth stations in the meteorological-satellite service notified before 1 January 2004. Any new assignment to these earth stations in this band shall also be protected from harmful interference from stations in the mobile-satellite service. (WRC-07)
5.382	Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Russian Federation, Guinea, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Lebanon, North Macedonia, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Turkmenistan, Ukraine and Yemen, the allocation of the frequency band 1 690–1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on

	a primary basis (see No. 5.33), and in the Dem. People's Rep. of Korea, the allocation of the frequency band 1 690 1 700 MHz to the fixed service is on a primary basis (see No. 5.33) and to the mobile, except aeronautical mobile, service on a secondary basis. (WRC-19)
5.384A	The frequency bands 1 710–1 885 MHz, 2 300–2 400 MHz and 2 500–2 690 MHz, or portions thereof, are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT) in accordance with Resolution 223 (Rev.WRC-15). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-15)
5.385	Additional allocation: the band 1 718.8–1 722.2 MHz is also allocated to the radio astronomy service on a secondary basis for spectral line observations. (WRC-2000)
5.388	The frequency bands 1 885–2 025 MHz and 2 110–2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications (IMT). Such use does not preclude the use of these frequency bands by other services to which they are allocated. The frequency bands should be made available for IMT in accordance with Resolution 212 (Rev.WRC-15) (see also Resolution 223 (Rev.WRC-15)). (WRC-15)
5.388A	In Regions 1 and 3, the bands 1 885–1 980 MHz, 2 010–2 025 MHz and 2 110–2 170 MHz and, in Region 2, the bands 1 885–1 980 MHz and 2 110–2 160 MHz may be used by high altitude platform stations as base stations to provide International Mobile Telecommunications (IMT), in accordance with Resolution 221 (Rev.WRC 07). Their use by IMT applications using high altitude platform stations as base stations does not preclude the use of these bands by any station in the services to which they are allocated and does not establish priority in the Radio Regulations. (WRC-12)
5.389A	The use of the bands 1 980–2 010 MHz and 2 170–2 200 MHz by the mobile-satellite service is subject to coordination under No. 9.11A and to the provisions of Resolution 716 (Rev.WRC-2000). (WRC-07)
5.391	In making assignments to the mobile service in the frequency bands 2 025–2 110 MHz and 2 200 2 290 MHz, administrations shall not introduce high-density mobile systems, as described in Recommendation ITU R SA.1154 0, and shall take that Recommendation into account for the introduction of any other type of mobile system. (WRC-15)
5.392	Administrations are urged to take all practicable measures to ensure that space-to-space transmissions between two or more non-geostationary satellites, in the space research, space operations and Earth exploration-satellite services in the bands 2 025–2 110 MHz and 2 200–2 290 MHz, shall not impose any constraints on Earth-to-space, space-to-Earth and other space-to-space transmissions of those services and in those bands between geostationary and non-geostationary satellites.
5.398	In respect of the radiodetermination-satellite service in the band 2 483.5–2 500 MHz, the provisions of No. 4.10 do not apply.

5.398A	Different category of service: In Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, the band 2 483.5–2 500 MHz is allocated on a primary basis to the radiolocation service. The radiolocation stations in these countries shall not cause harmful interference to, or claim protection from, stations of the fixed, mobile and mobile-satellite services operating in accordance with the Radio Regulations in the frequency band 2 483.5–2 500 MHz. (WRC-12)
5.399	Except for cases referred to in No. 5.401, stations of the radiodetermination-satellite service operating in the frequency band 2 483.5–2 500 MHz for which notification information is received by the Bureau after 17 February 2012, and the service area of which includes Armenia, Azerbaijan, Belarus, the Russian Federation, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine, shall not cause harmful interference to, and shall not claim protection from stations of the radiolocation service operating in these countries in accordance with No. 5.398A. (WRC-12)
5.402	The use of the band 2 483.5–2 500 MHz by the mobile-satellite and the radiodetermination-satellite services is subject to the coordination under No. 9.11A. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2 483.5–2 500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4 990–5 000 MHz band allocated to the radio astronomy service worldwide.
5.403	Subject to agreement obtained under No. 9.21, the band 2 520–2 535 MHz may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of No. 9.11A apply. (WRC-07)
5.410	The band 2 500–2 690 MHz may be used for tropospheric scatter systems in Region 1, subject to agreement obtained under No. 9.21. No. 9.21 does not apply to tropospheric scatter links situated entirely outside Region 1. Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in this band. When planning new tropospheric scatter radio-relay links in this band, all possible measures shall be taken to avoid directing the antennas of these links towards the geostationary-satellite orbit. (WRC-12)
5.412	Alternative allocation: in Kyrgyzstan and Turkmenistan, the band 2 500–2 690 MHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)
5.413	In the design of systems in the broadcasting-satellite service in the bands between 2 500 MHz and 2 690 MHz, administrations are urged to take all necessary steps to protect the radio astronomy service in the band 2 690–2 700 MHz.
5.414	The allocation of the frequency band 2 500–2 520 MHz to the mobile-satellite service (space-to-Earth) is subject to coordination under No. 9.11A. (WRC-07)
5.416	The use of the band 2 520–2 670 MHz by the broadcasting-satellite service is limited to national and regional systems for community reception, subject to agreement obtained under No. 9.21. The

	provisions of No. 9.19 shall be applied by administrations in this band in their bilateral and multilateral negotiations. (WRC-07)
5.418B	Use of the band 2 630–2 655 MHz by non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418, for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000, is subject to the application of the provisions of No. 9.12. (WRC-03)
5.418C	Use of the band 2 630–2 655 MHz by geostationary-satellite networks for which complete Appendix 4 coordination information, or notification information, has been received after 2 June 2000 is subject to the application of the provisions of No. 9.13 with respect to non geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. 5.418 and No. 22.2 does not apply. (WRC-03)
5.419	When introducing systems of the mobile-satellite service in the band 2 670–2 690 MHz, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with No. 9.11A. (WRC-07)
5.420	The band 2 655–2 670 MHz may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. 9.21. The coordination under No. 9.11A applies. (WRC-07)
5.422	Additional allocation: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Brunei Darussalam, the Dem. Rep. of the Congo, Côte d'Ivoire, Cuba, Djibouti, Egypt, the United Arab Emirates, Eritrea, Ethiopia, Gabon, Georgia, Guinea, Guinea-Bissau, Iran (Islamic Republic of), Iraq, Israel, Jordan, Kuwait, Lebanon, Mauritania, Mongolia, Montenegro, Nigeria, Oman, Pakistan, the Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, the Dem. Rep. of the Congo, Romania, Somalia, Tajikistan, Tunisia, Turkmenistan, Ukraine and Yemen, the band 2 690–2 700 MHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. Such use is limited to equipment in operation by 1 January 1985. (WRC-12)
5.423	In the band 2 700–2 900 MHz, ground-based radars used for meteorological purposes are authorised to operate on a basis of equality with stations of the aeronautical radionavigation service.
5.424A	In the band 2 900–3 100 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the radionavigation service. (WRC-03)
5.425	In the band 2 900–3 100 MHz, the use of the shipborne interrogator-transponder system (SIT) shall be confined to the sub-band 2 930–2 950 MHz.
5.426	The use of the band 2 900–3 100 MHz by the aeronautical radionavigation service is limited to ground-based radars.
5.427	In the bands 2 900–3 100 MHz and 9 300–9 500 MHz, the response from radar transponders shall not be capable of being confused with the response from radar beacons (racons) and shall not cause interference to ship or aeronautical radars in the radionavigation service, having regard, however, to No. 4.9.

5.430A	The allocation of the frequency band 3 400–3 600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. 9.21. This frequency band is identified for International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The provisions of Nos. 9.17 and 9.18 shall also apply in the coordination phase. Before an administration brings into use a (base or mobile) station of the mobile service in this frequency band, it shall ensure that the power flux-density (pfd) produced at 3 m above ground does not exceed −154.5 dB(W/(m2 · 4 kHz)) for more than 20% of time at the border of the territory of any other administration. This limit may be exceeded on the territory of any country whose administration has so agreed. In order to ensure that the pfd limit at the border of the territory of any other administration is met, the calculations and verification shall be made, taking into account all relevant information, with the mutual agreement of both administrations (the administration responsible for the terrestrial station and the administration responsible for the earth station) and with the assistance of the Bureau if so requested. In case of disagreement, calculation and verification of the pfd shall be made by the Bureau, taking into account the information referred to above. Stations of the mobile service in the frequency band 3 400–3 600 MHz shall not claim more protection from space stations than that provided in Table 21 4 of the Radio Regulations (Edition of 2004). (WRC-15)
5.436	Use of the frequency band 4 200–4 400 MHz by stations in the aeronautical mobile (R) service is reserved exclusively for wireless avionics intra-communication systems that operate in accordance with recognized international aeronautical standards. Such use shall be in accordance with Resolution 424 (WRC-15). (WRC-15)
5.437	Passive sensing in the Earth exploration-satellite and space research services may be authorized in the frequency band 4 200–4 400 MHz on a secondary basis. (WRC-15)
5.438	Use of the frequency band 4 200–4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. (WRC-15)
5.440	The standard frequency and time signal-satellite service may be authorised 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. 9.21
5.441	The use of the bands 4 500–4 800 MHz (space-to-Earth), 6 725–7 025 MHz (Earth-to-space) by the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7–10.95 GHz (space-to-Earth), 11.2–11.45 GHz (space-to-Earth) and 12.75–13.25 GHz (Earth-to-space) by geostationary-satellite systems in the fixed-satellite service shall be in accordance with the provisions of Appendix 30B. The use of the bands 10.7–10.95 GHz (space-to Earth),

	11.2–11.45 GHz (space-to-Earth) and 12.75–13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite system in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite system in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC 2000)
5.441B	In Angola, Armenia, Azerbaijan, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, China, Côte d'Ivoire, Djibouti, Eswatini, Russian Federation, Gambia, Guinea, Iran (Islamic Republic of), Kazakhstan, Kenya, Lao P.D.R., Lesotho, Liberia, Malawi, Mauritius, Mongolia, Mozambique, Nigeria, Uganda, Uzbekistan, the Dem. Rep. of the Congo, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, South Africa, Tanzania, Togo, Viet Nam, Zambia and Zimbabwe, the frequency band 4 800–4 990 MHz, or portions thereof, is identified for use by administrations wishing to implement International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. The use of IMT stations is subject to agreement obtained under No. 9.21 with concerned administrations, and IMT stations shall not claim protection from stations of other applications of the mobile service. In addition, before an administration brings into use an IMT station in the mobile service, it shall ensure that the power flux-density (pfd) produced by this station does not exceed −155 dB(W/(m^2 · 1 MHz)) produced up to 19 km above sea level at 20 km from the coast, defined as the low-water mark, as officially recognized by the coastal State. This pfd criterion is subject to review at WRC 23. Resolution 223 (Rev.WRC-19) applies. This identification shall be effective after WRC-19. (WRC-19)
5.442	In the frequency bands 4 825–4 835 MHz and 4 950–4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service. In Region 2 (except Brazil, Cuba, Guatemala, Mexico, Paraguay, Uruguay and Venezuela), and in Australia, the frequency band 4 825–4 835 MHz is also allocated to the aeronautical mobile service, limited to aeronautical mobile telemetry for flight testing by aircraft stations. Such use shall be in accordance with Resolution 416 (WRC 07) and shall not cause harmful interference to the fixed service. (WRC-15)
5.443AA	In the frequency bands 5 000–5 030 MHz and 5 091–5 150 MHz, the aeronautical mobile-satellite (R) service is subject to agreement

	obtained under No. 9.21. The use of these bands by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems.
5.443B	In order not to cause harmful interference to the microwave landing system operating above 5 030 MHz, the aggregate power flux-density produced at the Earth's surface in the frequency band 5 030–5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the frequency band 5 010–5 030 MHz shall not exceed −124.5 dB(W/m2) in a 150 kHz band. In order not to cause harmful interference to the radio astronomy service in the frequency band 4 990–5 000 MHz, radionavigation-satellite service systems operating in the frequency band 5 010–5 030 MHz shall comply with the limits in the frequency band 4 990–5 000 MHz defined in Resolution 741 (Rev.WRC-15). (WRC-15)
5.443C	The use of the frequency band 5 030–5 091 MHz by the aeronautical mobile (R) service is limited to internationally standardized aeronautical systems. Unwanted emissions from the aeronautical mobile (R) service in the frequency band 5 030–5 091 MHz shall be limited to protect RNSS system downlinks in the adjacent 5 010–5 030 MHz band. Until such time that an appropriate value is established in a relevant ITU-R Recommendation, the e.i.r.p. density limit of –75 dBW/MHz in the frequency band 5 010–5 030 MHz for any AM(R)S station unwanted emission should be used. (WRC-12)
5.443D	In the frequency band 5 030–5 091 MHz, the aeronautical mobile-satellite (R) service is subject to coordination under No. 9.11A. The use of this frequency band by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems.
5.444	The frequency band 5 030–5 150 MHz is to be used for the operation of the international standard system (microwave landing system) for precision approach and landing. In the frequency band 5 030–5 091 MHz, the requirements of this system shall have priority over other uses of this frequency band. For the use of the frequency band 5 091–5 150 MHz, No. 5.444A and Resolution 114 (Rev.WRC-15) apply. (WRC-15)
5.444A	The use of the allocation to the fixed-satellite service (Earth-to-space) in the frequency band 5 091 5 150 MHz is limited to feeder links of non geostationary satellite systems in the mobile-satellite service and is subject to coordination under No. 9.11A. The use of the frequency band 5 091–5 150 MHz by feeder links of non geostationary satellite systems in the mobile-satellite service shall be subject to application of Resolution 114 (Rev.WRC-15). Moreover, to ensure that the aeronautical radionavigation service is protected from harmful interference, coordination is required for feeder-link earth stations of the non-geostationary satellite systems in the mobile-satellite service which are separated by less than 450 km from the territory of an administration operating ground stations in the aeronautical radionavigation service. (WRC-15)
5.444B	The use of the frequency band 5 091–5 150 MHz by the aeronautical mobile service is limited to:

	– systems operating in the aeronautical mobile (R) service and in accordance with international aeronautical standards, limited to surface applications at airports. Such use shall be in accordance with Resolution 748 (Rev.WRC-19); – aeronautical telemetry transmissions from aircraft stations (see No. 1.83) in accordance with Resolution 418 (Rev.WRC-19). (WRC-19)
5.446	Additional allocation: in the countries listed in No. 5.369, the frequency band 5 150–5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. 9.21. In Region 2 (except in Mexico), the frequency band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in No. 5.369 and Bangladesh, the frequency band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the frequency bands 1 610–1 626.5 MHz and/or 2 483.5–2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed −159 dB(W/m2) in any 4 kHz band for all angles of arrival. (WRC-15)
5.446A	The use of the frequency bands 5 150–5 350 MHz and 5 470–5 725 MHz by the stations in the mobile, except aeronautical mobile, service shall be in accordance with Resolution 229 (Rev.WRC-19). (WRC-19)
5.446B	In the band 5 150–5 250 MHz, stations in the mobile service shall not claim protection from earth stations in the fixed-satellite service. No. 5.43A does not apply to the mobile service with respect to fixed-satellite service earth stations. (WRC-03)
5.446C	Additional allocation: in Region 1 (except in Algeria, Saudi Arabia, Bahrain, Egypt, United Arab Emirates, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Syrian Arab Republic, Sudan, South Sudan and Tunisia), the frequency band 5 150–5 250 MHz is also allocated to the aeronautical mobile service on a primary basis, limited to aeronautical telemetry transmissions from aircraft stations (see No. 1.83), in accordance with Resolution 418 (Rev.WRC-19). These stations shall not claim protection from other stations operating in accordance with Article 5. No. 5.43A does not apply. (WRC-19)
5.447A	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 No. 9.11A.
5.447B	Additional allocation: the band 5 150–5 216 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. This allocation is limited to feeder links of non-geostationary-satellite systems in the mobile-satellite service and is subject to provisions of No. 9.11A. The power flux-density at the Earth`s surface produced by space stations of the fixed-satellite service operating in the space-to-Earth direction in the band 5 150–5 216 MHz shall in no case exceed –164 dB(W/m²) in any 4 kHz band for all angles of arrival.
5.447D	The allocation of the band 5 250–5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors.

	Other uses of the band by the space research service are on a secondary basis. (WRC-97)
5.447F	In the frequency band 5 250–5 350 MHz, stations in the mobile service shall not claim protection from the radiolocation service, the Earth exploration-satellite service (active) and the space research service (active). The radiolocation service, the Earth exploration-satellite service (active) and the space research service (active) shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)
5.448A	The Earth exploration-satellite (active) and space research (active) services in the frequency band 5 250–5 350 MHz shall not claim protection from the radiolocation service. No. 5.43A does not apply. (WRC-03).
5.448B	The Earth exploration-satellite service (active) operating in the band 5 350–5 570 MHz and space research service (active) operating in the band 5 460–5 570 MHz shall not cause harmful interference to the aeronautical radionavigation service in the band 5 350–5 460 MHz, the radionavigation service in the band 5 460–5 470 MHz and the maritime radionavigation service in the band 5 470–5 570 MHz. (WRC-03)
5.448C	The space research service (active) operating in the band 5 350–5 460 MHz shall not cause harmful interference to nor claim protection from other services to which this band is allocated. (WRC-03)
5.448D	In the frequency band 5 350–5 470 MHz, stations in the radiolocation service shall not cause harmful interference to, nor claim protection from, radar systems in the aeronautical radionavigation service operating in accordance with No. 5.449. (WRC-03)
5.449	The use of the band 5 350–5 470 MHz by the aeronautical radionavigation service is limited to airborne radars and associated airborne beacons.
5.450A	In the frequency band 5 470–5 725 MHz, stations in the mobile service shall not claim protection from radiodetermination services. The radiodetermination services shall not impose more stringent conditions upon the mobile service than those stipulated in Resolution 229 (Rev.WRC-19). (WRC-19)
5.450B	In the frequency band 5 470–5 650 MHz, stations in the radiolocation service, except ground-based radars used for meteorological purposes in the band 5 600–5 650 MHz, shall not cause harmful interference to, nor claim protection from, radar systems in the maritime radionavigation service. (WRC-03)
5.452	Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorised to operate on a basis of equality with stations of the maritime radionavigation service.
5.454	Different category of service: in Azerbaijan, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 5 670–5 725 MHz to the space research service is on a primary basis (see No. 5.33). (WRC-12)
5.455	Additional allocation: in Armenia, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Uzbekistan, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and

	Ukraine, the frequency band 5 670–5 850 MHz is also allocated to the fixed service on a primary basis. (WRC-19)
5.457A	In the frequency bands 5 925–6 425 MHz and 14–14.5 GHz, earth stations located on board vessels may communicate with space stations of the fixed-satellite service. Such use shall be in accordance with Resolution 902 (WRC 03). In the frequency band 5 925–6 425 MHz, earth stations located on board vessels and communicating with space stations of the fixed-satellite service may employ transmit antennas with minimum diameter of 1.2 m and operate without prior agreement of any administration if located at least 330 km away from the low-water mark as officially recognized by the coastal State. All other provisions of Resolution 902 (WRC-03) shall apply. (WRC-15)
5.458	In the band 6 425–7 075 MHz, passive microwave sensor measurements are carried out over the oceans. In the band 7 075–7 250 MHz, passive microwave sensor measurements are carried out. Administrations should bear in mind the needs of the Earth exploration-satellite (passive) and space research (passive) services in their future planning of the bands 6 425–7 025 MHz and 7 075–7 250 MHz.
5.458A	In making assignments in the band 6 700–7 075 MHz to space stations of the fixed-satellite service, administrations are urged to take all practicable steps to protect spectral line observations of the radio astronomy service in the band 6 650–6 675.2 MHz from harmful interference from unwanted emissions.
5.458B	The space-to-Earth allocation to the fixed-satellite service in the band 6 700–7 075 MHz is limited to feeder links for non-geostationary satellite systems of the mobile-satellite service and is subject to coordination under No. 9.11A. The use of the band 6 700–7 075 MHz (space-to-Earth) by feeder links for non-geostationary satellite systems in the mobile-satellite service is not subject to No. 22.2.
5.459	Additional allocation: in the Russian Federation, the frequency bands 7 100–7 155 MHz and 7 190–7 235 MHz are also allocated to the space operation service (Earth-to-space) on a primary basis, subject to agreement obtained under No. 9.21. In the frequency band 7 190–7 235 MHz, with respect to the Earth exploration-satellite service (Earth-to-space), No. 9.21 does not apply. (WRC-15)
5.460	No emissions from space research service (Earth-to-space) systems intended for deep space shall be effected in the frequency band 7 190–7 235 MHz Geostationary satellites in the space research service operating in the frequency band 7 190–7 235 MHz shall not claim protection from existing and future stations of the fixed and mobile services and No. 5.43A does not apply. (WRC-15)
5.460A	The use of the frequency band 7 190–7 250 MHz (Earth-to-space) by the Earth exploration-satellite service shall be limited to tracking, telemetry and command for the operation of spacecraft. Space stations operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190–7 250 MHz shall not claim protection from existing and future stations in the fixed and mobile services, and No. 5.43A does not apply. No. 9.17 applies. Additionally, to ensure protection of the existing and future deployment of fixed and mobile services, the location of earth stations supporting spacecraft in the

	Earth exploration-satellite service in non-geostationary orbits or geostationary orbit shall maintain a separation distance of at least 10 km and 50 km, respectively, from the respective border(s) of neighbouring countries, unless a shorter distance is otherwise agreed between the corresponding administrations. (WRC-15)
5.460B	Space stations on the geostationary orbit operating in the Earth exploration-satellite service (Earth-to-space) in the frequency band 7 190–7 235 MHz shall not claim protection from existing and future stations of the space research service, and No. 5.43A does not apply. (WRC-15)
5.461	Additional allocation: the bands 7 250–7 375 MHz (space-to-Earth) and 7 900–8 025 MHz (Earth-to-space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. 9.21.
5.461A	The use of the band 7 450–7 550 MHz by the meteorological-satellite service (space-to-Earth) is limited to geostationary-satellite systems. Non-geostationary meteorological-satellite systems in this band notified before 30 November 1997 may continue to operate on a primary basis until the end of their lifetime. (WRC-97)
5.461AA	The use of the frequency band 7 375–7 750 MHz by the maritime mobile-satellite service is limited to geostationary-satellite networks. (WRC-15)
5.461AB	In the frequency band 7 375–7 750 MHz, earth stations in the maritime mobile-satellite service shall not claim protection from, nor constrain the use and development of, stations in the fixed and mobile, except aeronautical mobile, services. No. 5.43A does not apply. (WRC-15)
5.461B	The use of the band 7 750–7 900 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems. (WRC-12)
5.462A	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: –135 dB(W/m2) in a 1 MHz band for $0 \leq \theta < 5°$ –135 + 0.5 (θ – 5) dB(W/m2) in a 1 MHz band for $5 \leq \theta < 25°$ –125 dB(W/m²) in a 1 MHz band for $25 \leq \theta \leq 90°$ These values are subject to study under Resolution 124 (WRC-97)*. (WRC-97). *Note by the Secretariat: This Resolution was revised by WRC-2000
5.463	Aircraft stations are not permitted to transmit in the band 8 025–8 400 MHz. (WRC-97)
5.465	5.465 In the space research service, the use of the band 8 400–8 450 MHz is limited to deep space.
5.469	Additional allocation: in Armenia, Azerbaijan, Belarus, Georgia, Hungary, Lithuania, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Czech Rep., Romania, the Russian Federation, Tajikistan, Turkmenistan and Ukraine, the band 8 500–8 750 MHz is also allocated to the land mobile and radionavigation services on a primary basis. (WRC-12)

5.469A	In the band 8 550–8 650 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radiolocation service. (WRC-97)
5.470	The use of the band 8 750–8 850 MHz by the aeronautical radionavigation service is limited to airborne Doppler navigation aids on a centre frequency of 8 800 MHz.
5.472	In the bands 8 850–9 000 MHz and 9 200–9 225 MHz, the maritime radionavigation service is limited to shore-based radars.
5.473	Additional allocation: in Armenia, Austria, Azerbaijan, Belarus, Cuba, the Russian Federation, Georgia, Hungary, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the frequency bands 8 850 9 000 MHz and 9 200–9 300 MHz are also allocated to the radionavigation service on a primary basis. (WRC-19)
5.473A	In the band 9 000–9 200 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, systems identified in No. 5.337 operating in the aeronautical radionavigation service, or radar systems in the maritime radionavigation service operating in this band on a primary basis in the countries listed in No. 5.471. (WRC-07)
5.474	In the band 9 200–9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation (see also Article 31).
5.474A	The use of the frequency bands 9 200–9 300 MHz and 9 900–10 400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9 300–9 900 MHz. Such use is subject to agreement to be obtained under No. 9.21 from Algeria, Saudi Arabia, Bahrain, Egypt, Indonesia, Iran (Islamic Republic of), Lebanon and Tunisia. An administration that has not replied under No. 9.52 is considered as not having agreed to the coordination request. In this case, the notifying administration of the satellite system operating in the Earth exploration-satellite service (active) may request the assistance of the Bureau under Sub-Section IID of Article 9. (WRC-15)
5.474B	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU R RS.2066 0. (WRC-15)
5.474C	Stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU R RS.2065 0. (WRC-15)
5.474D	Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200–9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900–10 000 MHz and the radiolocation service in the frequency band 10.0–10.4 GHz. (WRC-15)
5.475	The use of the band 9 300–9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band

	9 300–9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. (WRC-07)
5.475A	The use of the band 9 300–9 500 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 300 MHz that cannot be fully accommodated within the 9 500–9 800 MHz band. (WRC-07)
5.475B	In the band 9 300–9 500 MHz, stations operating in the radiolocation service shall not cause harmful interference to, nor claim protection from, radars operating in the radionavigation service in conformity with the Radio Regulations. Ground-based radars used for meteorological purposes have priority over other radiolocation uses. (WRC-07)
5.476A	In the band 9 300–9 800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from, stations of the radionavigation and radiolocation services. (WRC-07)
5.478A	In the band 9 800–9 900 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, nor claim protection from stations of the fixed service to which this band is allocated on a secondary basis.
5.478B	The use of the band 9 800–9 900 MHz by the Earth exploration-satellite service (active) and the space research service (active) is limited to systems requiring necessary bandwidth greater than 500 MHz that cannot be fully accommodated within the 9 300–9 800 MHz band.
5.479	The band 9 975–10 025 MHz is also allocated to the meteorological-satellite service on a secondary basis for use by weather radars.
5.482	In the band 10.6–10.68 GHz, the power delivered to the antenna of stations of the fixed and mobile, except aeronautical mobile, services shall not exceed –3 dBW. This limit may be exceeded, subject to agreement obtained under No. 9.21. However, in Algeria, Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, Egypt, United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Jordan, Libyan Arab Jamahiriya, Kazakhstan, Kuwait, Lebanon, Morocco, Mauritania, Moldova, Nigeria, Oman, Uzbekistan, Pakistan, Philippines, Qatar, Syrian Arab Republic, Kyrgyzstan, Singapore, Tajikistan, Tunisia, Turkmenistan and Viet Nam, this restriction on the fixed and mobile, except aeronautical mobile, service is not applicable. (WRC-07)
5.482A	For sharing of the band 10.6–10.68 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile, except aeronautical mobile, services, Resolution 751 (WRC-07) applies. (WRC-07)
5.484	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 oadcasting-satellite service.
5.484A	The use of the bands 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), 11.7–12.2 GHz (space-to-Earth) in Region 2, 12.2-12.75 GHz (space-to-Earth) in Region 3, 12.5–12.75 GHz (space-to-Earth) in Region 1, 13.75–14.5 GHz (Earth-to-space), 17.8–18.6 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 27.5–28.6 GHz (Earth-to-space), 29.5–30 GHz (Earth-to-space) by a non-geostationary-

	satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.484B	Resolution 155 (WRC-15) shall apply. (WRC-15)
5.487	In the band 11.7–12.5 GHz in Regions 1 and 3, the fixed, fixed-satellite, mobile, except aeronautical mobile, and broadcasting services, in accordance with their respective allocations, shall not cause harmful interference to, or claim protection from, broadcasting-satellite stations operating in accordance with the Regions 1 and 3 Plan in Appendix 30. (WRC-03)
5.487A	Additional allocation: in Region 1, the band 11.7–12.5 GHz, in Region 2, the band 12.2–12.7 GHz and, in Region 3, the band 11.7–12.2 GHz, are also allocated to the fixed-satellite service (space-to-Earth) on a primary basis, limited to non-geostationary systems and subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non-geostationary-satellite systems in the fixed-satellite service shall not claim protection from geostationary-satellite networks in the broadcasting-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-03)
5.492	Assignments to stations of the broadcasting-satellite service which are in conformity with the appropriate regional Plan or included in the Regions 1 and 3 List in Appendix 30 may also be used for transmissions in the fixed-satellite service (space-to-Earth), provided that such transmissions do not cause more interference, or require more protection from interference, than the broadcasting-satellite service transmissions operating in conformity with the Plan or the List, as appropriate. (WRC-2000)
5.497	The use of the band 13.25–13.4 GHz by the aeronautical radionavigation service is limited to Doppler navigation aids.

5.498A	The Earth exploration-satellite (active) and space research (active) services operating in the band 13.25–13.4 GHz shall not cause harmful interference to, or constrain the use and development of, the aeronautical radionavigation service. (WRC-97)
5.499A	The use of the frequency band 13.4–13.65 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary-satellite systems and is subject to agreement obtained under No. 9.21 with respect to satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015. (WRC-15)
5.499B	Administrations shall not preclude the deployment and operation of transmitting earth stations in the standard frequency and time signal-satellite service (Earth-to-space) allocated on a secondary basis in the frequency band 13.4–13.65 GHz due to the primary allocation to FSS (space-to-Earth). (WRC-15)
5.499C	The allocation of the frequency band 13.4–13.65 GHz to the space research service on a primary basis is limited to: – satellite systems operating in the space research service (space-to-space) to relay data from space stations in the geostationary-satellite orbit to associated space stations in non-geostationary satellite orbits for which advance publication information has been received by the Bureau by 27 November 2015, – active spaceborne sensors, – satellite systems operating in the space research service (space-to-Earth) to relay data from space stations in the geostationary-satellite orbit to associated earth stations. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)
5.499D	In the frequency band 13.4–13.65 GHz, satellite systems in the space research service (space-to-Earth) and/or the space research service (space-to-space) shall not cause harmful interference to, nor claim protection from, stations in the fixed, mobile, radiolocation and Earth exploration-satellite (active) services. (WRC-15)
5.499E	In the frequency band 13.4–13.65 GHz, geostationary-satellite networks in the fixed-satellite service (space-to-Earth) shall not claim protection from space stations in the Earth exploration-satellite service (active) operating in accordance with these Regulations, and No. 5.43A does not apply. The provisions of No. 22.2 do not apply to the Earth exploration-satellite service (active) with respect to the fixed-satellite service (space-to-Earth) in this frequency band. (WRC-15)
5.501A	The allocation of the frequency band 13.65–13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the frequency band by the space research service are on a secondary basis. (WRC-15)
5.501B	In the band 13.4–13.75 GHz, the earth exploration-satellite (active) and space research (active) services shall not cause harmful interference to, or constrain the use and development of, the radiolocation service. (WRC-97)

5.502	In the band 13.75–14 GHz, an earth station of a geostationary fixed-satellite service network shall have a minimum antenna diameter of 1.2 m and an earth station of a non-geostationary fixed-satellite service system shall have a minimum antenna diameter of 4.5 m. In addition, the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW for elevation angles above 2° and 65 dBW at lower angles. Before an administration brings into use an earth station in a geostationary-satellite network in the fixed-satellite service in this band with an antenna size smaller than 4.5 m, it shall ensure that the power flux-density produced by this earth station does not exceed: 1) –115 dB (W/(m2 • 10 MHz)) for more than 1% of the time produced at 36 m above sea level at the low water mark, as officially recognized by the coastal State; 2) –115 dB (W/(m2 • 10 MHz)) for more than 1% of the time produced 3 m above ground at the border of the territory of an administration deploying or planning to deploy land mobile radars in this band, unless prior agreement has been obtained. For earth stations within the fixed-satellite service having an antenna diameter greater than or equal to 4.5 m, the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW (WRC-03)
5.503	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. Until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band: – in the band 13.77–13.78 GHz, the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in geostationary-satellite orbit shall not exceed: i) 4.7D + 28 dB (W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 1.2 m and less than 4.5 m; ii) 49.2 + 20 log(D/4.5) dB (W/40 kHz), where D is the fixed-satellite service earth station antenna diameter (m) for antenna diameters equal to or greater than 4.5 m and less than 31.9 m; iii) 66.2 dB (W/40 kHz) for any fixed-satellite service earth station for antenna diameters (m) equal to or greater than 31.9 m; iv) 56.2 dB (W/4 kHz) for narrow-band (less than 40 kHz of necessary bandwidth) fixed-satellite service earth station emissions from any fixed-satellite service earth station having an antenna diameter of 4.5 m or greater; – the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in non-geostationary-satellite orbit shall not exceed 51 dBW in the 6 MHz band from 13.772 to 13.778 GHz.

	Automatic power control may be used to increase the e.i.r.p. density in these frequency ranges to compensate for rain attenuation, to the extent that the power flux-density at the fixed-satellite service space station does not exceed the value resulting from use by an earth station of an e.i.r.p. meeting the above limits in clear-sky conditions. (WRC-03)
5.504	The use of the band 14–14.3 GHz by the radionavigation service shall be such as to provide sufficient protection to space stations of the fixed-satellite service.
5.504A	In the band 14–14.5 GHz, aircraft earth stations in the secondary aeronautical mobile-satellite service may also communicate with space stations in the fixed-satellite service. The provisions of Nos. 5.29, 5.30 and 5.31 apply. (WRC-03)
5.506	The band 14–14.5 GHz may be used, within the fixed-satellite service (Earth-to-space), for feeder links for the broadcasting-satellite service, subject to coordination with other networks in the fixed-satellite service. Such use of feeder links is reserved for countries outside Europe.
5.506A	In the band 14–14.5 GHz, ship earth stations with an e.i.r.p. greater than 21 dBW shall operate under the same conditions as earth stations located on board vessels, as provided in Resolution 902 (WRC-03). This footnote shall not apply to ship earth stations for which the complete Appendix 4 information has been received by the Bureau prior to 5 July 2003. (WRC-03)
5.509B	The use of the frequency bands 14.5–14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5–14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service is limited to geostationary-satellites. (WRC-15)
5.509C	For the use of the frequency bands 14.5–14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.5–14.8 GHz in countries listed in Resolution 164 (WRC-15) by the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service, the fixed-satellite service earth stations shall have a minimum antenna diameter of 6 m and a maximum power spectral density of −44.5 dBW/Hz at the input of the antenna. The earth stations shall be notified at known locations on land. (WRC-15)
5.509D	Before an administration brings into use an earth station in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service in the frequency bands 14.5–14.75 GHz (in countries listed in Resolution 163 (WRC-15)) and 14.5–14.8 GHz (in countries listed in Resolution 164 (WRC-15)), it shall ensure that the power flux-density produced by this earth station does not exceed −151.5 dB(W/(m^2 · 4 kHz)) produced at all altitudes from 0 m to 19 000 m above sea level at 22 km seaward from all coasts, defined as the low-water mark, as officially recognized by each coastal State. (WRC-15)
5.509E	In the frequency bands 14.50–14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50–14.8 GHz in countries listed in Resolution 164 (WRC-15), the location of earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall maintain a separation distance of at

	least 500 km from the border(s) of other countries unless shorter distances are explicitly agreed by those administrations. No. 9.17 does not apply. When applying this provision, administrations should consider the relevant parts of these Regulations and the latest relevant ITU R Recommendations. (WRC-15)
5.509F	In the frequency bands 14.50–14.75 GHz in countries listed in Resolution 163 (WRC-15) and 14.50–14.8 GHz in countries listed in Resolution 164 (WRC-15), earth stations in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service shall not constrain the future deployment of the fixed and mobile services. (WRC-15)
5.509G	The frequency band 14.5–14.8 GHz is also allocated to the space research service on a primary basis. However, such use is limited to the satellite systems operating in the space research service (Earth-to-space) to relay data to space stations in the geostationary-satellite orbit from associated earth stations. Stations in the space research service shall not cause harmful interference to, or claim protection from, stations in the fixed and mobile services and in the fixed-satellite service limited to feeder links for the broadcasting-satellite service and associated space operations functions using the guardbands under Appendix 30A and feeder links for the broadcasting-satellite service in Region 2. Other uses of this frequency band by the space research service are on a secondary basis. (WRC-15)
5.510	Except for use in accordance with Resolution 163 (WRC-15) and Resolution 164 (WRC-15), the use of the frequency band 14.5–14.8 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. This use is reserved for countries outside Europe. Uses other than feeder links for the broadcasting-satellite service are not authorized in Regions 1 and 2 in the frequency band 14.75–14.8 GHz. (WRC-15)
5.511A	Use of the frequency band 15.43–15.63 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. 9.11A. (WRC-15)
5.511C	Stations operating in the aeronautical radionavigation service shall limit the effective e.i.r.p. in accordance with Recommendation ITU R S.1340 0. The minimum coordination distance required to protect the aeronautical radionavigation stations (No. 4.10 applies) from harmful interference from feeder-link earth stations and the maximum e.i.r.p. transmitted towards the local horizontal plane by a feeder-link earth station shall be in accordance with Recommendation ITU R S.1340 0. (WRC-15)
5.511D	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. 9.11A 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. 4.10 applies). (WRC-97)
5.511E	In the frequency band 15.4–15.7 GHz, stations operating in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the aeronautical radionavigation service. (WRC-12)
5.511F	In order to protect the radio astronomy service in the frequency band 15.35–15.4 GHz, radiolocation stations operating in the frequency band 15.4 15.7 GHz shall not exceed the power flux-density level of −156 dB(W/m2) in a 50 MHz bandwidth in the frequency band 15.35–15.4 GHz, at any radio astronomy observatory site for more than 2 per cent of the time. (WRC-12)
5.512	Additional allocation: in Algeria, Saudi Arabia, Austria, Bahrain, Bangladesh, Brunei Darussalam, Cameroon, Congo (Rep. of the), Egypt, El Salvador, the United Arab Emirates, Eritrea, Finland, Guatemala, India, Indonesia, Iran (Islamic Republic of), Jordan, Kenya, Kuwait, Lebanon, Libya, Malaysia, Mali, Morocco, Mauritania, Montenegro, Nepal, Nicaragua, Niger, Oman, Pakistan, Qatar, Syrian Arab Republic, the Dem. Rep. of the Congo, Singapore, Somalia, Sudan, South Sudan, Chad, Togo and Yemen, the frequency band 15.7 17.3 GHz is also allocated to the fixed and mobile services on a primary basis. (WRC-15)
5.513A	Spaceborne active sensors operating in the band 17.2–17.3 GHz shall not cause harmful interference to, or constrain the development of, the radiolocation and other services allocated on a primary basis. (WRC-97)
5.516	The use of the band 17.3–18.1 GHz by geostationary-satellite systems in the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service. The use of the band 17.3–17.8 GHz in Region 2 by systems in the fixed-satellite service (Earth-to-space) is limited to geostationary satellites. For the use of the band 17.3–17.8 GHz in Region 2 by feeder links for the broadcasting satellite service in the band 12.2–12.7 GHz, see Article 11. The use of the bands 17.3–18.1 GHz (Earth-to-space) in Regions 1 and 3 and 17.8–18.1 GHz (Earth-to-space) in Region 2 by non geostationary-satellite systems in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service. Non geostationary-satellite systems in the fixed satellite service shall not claim protection from geostationary-satellite networks in the fixed-satellite service operating in accordance with the Radio Regulations, irrespective of the dates of receipt by the Bureau of the complete coordination or notification information, as appropriate, for the non-geostationary-satellite systems in the fixed-satellite service and of the complete coordination or notification information, as appropriate, for the geostationary-satellite networks, and No. 5.43A does not apply. Non-

	geostationary-satellite systems in the fixed-satellite service in the above bands shall be operated in such a way that any unacceptable interference that may occur during their operation shall be rapidly eliminated. (WRC-2000)
5.516A	In the band 17.3–17.7 GHz, earth stations of the fixed-satellite service (space-to-Earth) in Region 1 shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under Appendix 30A, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link. (WRC-03)
5.516B	The following bands are identified for use by high-density applications in the fixed-satellite service: 17.3–17.7 GHz (space-to-Earth) in Region 1, 18.3–19.3 GHz (space-to-Earth) in Region 2, 19.7–20.2 GHz (space-to-Earth) in all Regions, 39.5–40 GHz (space-to-Earth) in Region 1, 40–40.5 GHz (space-to-Earth) in all Regions, 40.5–42 GHz (space-to-Earth) in Region 2, 47.5–47.9 GHz (space-to-Earth) in Region 1, 48.2–48.54 GHz (space-to-Earth) in Region 1, 49.44–50.2 GHz (space-to-Earth) in Region 1, and 27.5–27.82 GHz (Earth-to-space) in Region 1, 28.35–28.45 GHz (Earth-to-space) in Region 2, 28.45–28.94 GHz (Earth-to-space) in all Regions, 28.94–29.1 GHz (Earth-to-space) in Region 2 and 3, 29.25–29.46 GHz (Earth-to-space) in Region 2, 29.46–30 GHz (Earth-to-space) in all Regions, 48.2–50.2 GHz (Earth-to-space) in Region 2. This identification does not preclude the use of these frequency bands by other fixed-satellite service applications or by other services to which these frequency bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the frequency bands. Administrations should take this into account when considering regulatory provisions in relation to these frequency bands. See Resolution 143 (Rev.WRC-19). (WRC-19)
5.517A	The operation of earth stations in motion communicating with geostationary fixed-satellite service space stations within the frequency bands 17.7–19.7 GHz (space-to-Earth) and 27.5–29.5 GHz (Earth-to-space) shall be subject to the application of Resolution 169 (WRC-19). (WRC-19)
5.519	Additional allocation: the bands 18.0–18.3 GHz in Region 2 and 18.1–18.4 GHz in Regions 1 and 3 are also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Their use is limited to geostationary satellites. (WRC-07)
5.520	The use of the band 18.1–18.4 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links of geostationary-satellite systems in the broadcasting-satellite service. (WRC-2000)
5.522A	The emissions of the fixed service and the fixed-satellite service in the band 18.6–18.8 GHz are limited to the values given in Nos. 21.5A and 21.16.2, respectively. (WRC-2000)

5.522B	The use of the band 18.6–18.8 GHz by the fixed-satellite service is limited to geostationary systems and systems with an orbit of apogee greater than 20 000 km. (WRC-2000)
5.523A	The use of the bands 18.8–19.3 GHz (space-to-Earth) and 28.6–29.1 GHz (Earth-to-space) by geostationary and non-geostationary fixed satellite service networks is subject to the application of the provisions of No. 9.11A and No. 22.2 does not apply. Administrations having geostationary-satellite networks under coordination prior to 18 November 1995 shall cooperate to the maximum extent possible to coordinate pursuant to No. 9.11A with non-geostationary-satellite networks for which notification information has been received by the Bureau prior to that date, with a view to reaching results acceptable to all the parties concerned. Non-geostationary-satellite networks shall not cause unacceptable interference to geostationary fixed-satellite service networks for which complete Appendix 4 notification information is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523B	The use of the band 19.3–19.6 GHz (Earth-to-space) by the Fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, and No. 22.2 does not apply.
5.523C	No. 22.2 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 4 coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995. (WRC-97)
5.523D	The use of the band 19.3–19.7 GHz (space-to-Earth) by geostationary fixed-satellite service systems and by feeder links for non-geostationary-satellite systems in the mobile-satellite service is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2. The use of this band for other non-geostationary fixed-satellite service systems, or for the cases indicated in Nos. 5.523C and 5.523E, is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2. (WRC-97)
5.523E	No. 22.2 shall continue to apply in the bands 19.6–19.7 GHz and 29.4–29.5 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix 4 coordination information, or notification information, is considered as having been received by the Bureau by 21 November 1997. (WRC-97)
5.525	In order to facilitate interregional coordination between networks in the mobile-satellite and fixed-satellite services, carriers in the mobile-satellite service that are most susceptible to interference shall, to the extent practicable, be located in the higher parts of the bands 19.7–20.2 GHz and 29.5 30 GHz
5.526	In the bands 19.7–20.2 GHz and 29.5–30 GHz in Region 2, and in the bands 20.1–20.2 GHz and 29.9–30 GHz in Regions 1 and 3, networks

	which are both in the fixed-satellite service and in the mobile-satellite service may include links between earth stations at specified or unspecified points or while in motion, through one or more satellites for point-to-point and point-to-multipoint communications.
5.527	In the bands 19.7–20.2 GHz and 29.5–30 GHz, the provisions of No 4.10 do not apply with respect to the mobile-satellite service.
5.527A	The operation of earth stations in motion communicating with the FSS is subject to Resolution 156 (WRC-15). (WRC-15)
5.528	The allocation to the mobile-satellite service is intended for use by networks which use narrow spot-beam antennas and other advanced technology at the space stations. Administrations operating systems in the mobile-satellite service in the band 19.7–20.1 GHz in Region 2 and in the band 20.1 20.2 GHz shall take all practicable steps to ensure the continued availability of these bands for administrations operating fixed and mobile systems in accordance with the provisions of No. 5.524.
5.530A	Unless otherwise agreed between the administrations concerned, any station in the fixed or mobile services of an administration shall not produce a power flux-density in excess of −120.4 dB(W/(m2 · MHz)) at 3 m above the ground of any point of the territory of any other administration in Regions 1 and 3 for more than 20% of the time. In conducting the calculations, administrations should use the most recent version of Recommendation ITU R P.452 (see also the most recent version of Recommendation ITU R BO.1898). (WRC-15)
5.530B	In the band 21.4–22 GHz, in order to facilitate the development of the broadcasting-satellite service, administrations in Regions 1 and 3 are encouraged not to deploy stations in the mobile service and are encouraged to limit the deployment of stations in the fixed service to point-to-point links. (WRC-12)
5.532	The use of the band 22.21–22.5 GHz by the Earth exploration-satellite (passive) and space research (passive) services shall not impose constraints upon the fixed and mobile, except aeronautical mobile, services.
5.532A	The location of earth stations in the space research service shall maintain a separation distance of at least 54 km from the respective border(s) of neighbouring countries to protect the existing and future deployment of fixed and mobile services unless a shorter distance is otherwise agreed between the corresponding administrations. Nos. 9.17 and 9.18 do not apply.
5.532AB	The frequency band 24.25–27.5 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 242 (WRC-19) applies. (WRC-19)
5.532B	Use of the band 24.65–25.25 GHz in Region 1 and the band 24.65–24.75 GHz in Region 3 by the fixed-satellite service (Earth-to-space) is limited to earth stations using a minimum antenna diameter of 4.5 m. (WRC-12)

5.535A	The use of the band 29.1–29.5 GHz (Earth-to-space) by the fixed-satellite service is limited to geostationary-satellite systems and feeder links to non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. 9.11A, but not subject to the provisions of No. 22.2, except as indicated in Nos. 5.523C and 5.523E where such use is not subject to the provisions of No. 9.11A and shall continue to be subject to Articles 9 (except No. 9.11A) and 11 procedures, and to the provisions of No. 22.2. (WRC-97)
5.536	Use of the 25.25–27.5 GHz band by the inter-satellite service is limited to space research and Earth exploration-satellite applications, and also transmissions of data originating from industrial and medical activities in space.
5.536A	Administrations operating earth stations in the Earth exploration-satellite service or the space research service shall not claim protection from stations in the fixed and mobile services operated by other administrations. In addition, earth stations in the Earth exploration-satellite service or in the space research service should be operated taking into account the most recent version of Recommendation ITU R SA.1862. Resolution 242 (WRC-19) applies. (WRC-19)
5.536B	In Algeria, Saudi Arabia, Austria, Bahrain, Belgium, Brazil, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Estonia, Finland, Hungary, India, Iran (Islamic Republic of), Iraq, Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Lebanon, Libya, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, Qatar, the Syrian Arab Republic, Dem. People's Rep. of Korea, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Slovenia, Sudan, Sweden, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the frequency band 25.5–27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. Resolution 242 (WRC-19) applies. (WRC-19)
5.536C	In Algeria, Saudi Arabia, Bahrain, Botswana, Brazil, Cameroon, Comoros, Cuba, Djibouti, Egypt, United Arab Emirates, Estonia, Finland, Iran (Islamic Rep. of), Israel, Jordan, Kenya, Kuwait, Lithuania, Malaysia, Morocco, Nigeria, Oman, Qatar, the Syrian Arab Republic, Somalia, Sudan, South Sudan, Tanzania, Tunisia, Uruguay, Zambia and Zimbabwe, earth stations operating in the space research service in the band 25.5–27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services. (WRC-03)
5.537A	In Bhutan, Cameroon, China, Korea (Rep. of), the Russian Federation, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Malaysia, Maldives, Mongolia, Myanmar, Uzbekistan, Pakistan, the Philippines, Kyrgyzstan, the Dem. People's Rep. of Korea, Sudan, Sri Lanka, Thailand and Viet Nam, the allocation to the fixed service in the frequency band 27.9–28.2 GHz may also be used by high altitude platform stations (HAPS) within the territory of these countries. Such use of 300 MHz of the fixed-service allocation by HAPS in the above countries is further limited to operation in the HAPS-to-ground

	direction and shall not cause harmful interference to, nor claim protection from, other types of fixed-service systems or other co-primary services. Furthermore, the development of these other services shall not be constrained by HAPS. See Resolution 145 (Rev.WRC-19). (WRC-19)
5.538	Additional allocation: the bands 27.500–27.501 GHz and 29.999–30.000 GHz are also allocated to the fixed-satellite service (space to Earth) on a primary basis for the beacon transmissions intended for up-link power control. Such space-to-Earth transmissions shall not exceed an equivalent isotropically radiated power (e.i.r.p.) of +10 dBW in the direction of adjacent satellites on the geostationary-satellite orbit. (WRC-07)
5.539	The band 27.5–30 GHz may be used by the fixed-satellite service (Earth-to-space) for the provision of feeder links for the broadcasting-satellite service.
5.540	Additional allocation: the band 27.501–29.999 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis for beacon transmissions intended for up-link power control.
5.541	In the band 28.5–30 GHz, the earth exploration-satellite service is limited to the transfer of data between stations and not to the primary collection of information by means of active or passive sensors.
5.541A	Feeder links of non-geostationary networks in the mobile-satellite service and geostationary networks in the fixed-satellite service operating in the band 29.1–29.5 GHz (Earth-to-space) shall employ uplink adaptive power control or other methods of fade compensation, such that the earth station transmissions shall be conducted at the power level required to meet the desired link performance while reducing the level of mutual interference between both networks. These methods shall apply to networks for which Appendix 4 coordination information is considered as having been received by the Bureau after 17 May 1996 and until they are changed by a future competent world radiocommunication conference. Administrations submitting Appendix 4 information for coordination before this date are encouraged to utilize these techniques to the extent practicable. (WRC-2000)
5.543	The band 29.95–30 GHz may be used for space-to-space links in the Earth exploration-satellite service for telemetry, tracking, and control purposes, on a secondary basis.
5.543B	The allocation to the fixed service in the frequency band 31–31.3 GHz is identified for worldwide use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 167 (WRC-19). (WRC-19)
5.544	In the band 31–31.3 GHz the power flux-density limits specified in Article 21, Table 21–4 shall apply to the space research service.
5.546	Different category of service: in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of),

	Israel, Jordan, Lebanon, Moldova, Mongolia, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the frequency band 31.5–31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. 5.33). (WRC-19)
5.547	The bands 31.8–33.4 GHz, 37–40 GHz, 40.5–43.5 GHz, 51.4–52.6 GHz, 55.78–59 GHz and 64–66 GHz are available for high-density applications in the fixed service (see Resolution 75 (WRC 2000)). Administrations should take this into account when considering regulatory provisions in relation to these bands. Because of the potential deployment of high-density applications in the fixed-satellite service in the bands 39.5–40 GHz and 40.5–42 GHz (see No. 5.516B), administrations should further take into account potential constraints to high-density applications in the fixed service, as appropriate. (WRC-07)
5.547A	Administrations should take practical measures to minimize the potential interference between stations in the fixed service and airborne stations in the radionavigation service in the 31.8 33.4 GHz band, taking into account the operational needs of the airborne radar systems. (WRC-2000)
5.548	In designing systems for the inter-satellite service in the band 32.3–33 GHz, for the radionavigation service in the band 32–33 GHz, and for the space research service (deep space) in the band 31.8–32.3 GHz, administrations shall take all necessary measures to prevent harmful interference between these services, bearing in mind the safety aspects of the radionavigation service (see Recommendation 707). (WRC-03)
5.549A	In the band 35.5–36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed –73.3 dB(W/m2) in this band. (WRC-03)
5.550	Different category of service: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kyrgyzstan, Tajikistan and Turkmenistan, the allocation of the band 34.7–35.2 GHz to the space research service is on a primary basis (see No. 5.33). (WRC-12)
5.550A	For sharing of the band 36–37 GHz between the Earth exploration-satellite (passive) service and the fixed and mobile services, Resolution 752 (WRC-07) shall apply. (WRC-07)
5.550B	The frequency band 37–43.5 GHz, or portions thereof, is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Because of the potential deployment of FSS earth stations within the frequency range 37.5–42.5 GHz and high-density applications in the fixed-satellite service in the frequency bands 39.5–40 GHz in Region 1, 40–40.5 GHz in all Regions and 40.5–42 GHz in Region 2 (see No. 5.516B), administrations should further take

	into account potential constraints to IMT in these frequency bands, as appropriate. Resolution 243 (WRC-19) applies. (WRC-19)
5.550C	The use of the frequency bands 37.5–39.5 GHz (space-to-Earth), 39.5–42.5 GHz (space to Earth), 47.2–50.2 GHz (Earth-to-space) and 50.4–51.4 GHz (Earth-to-space) by a non-geostationary satellite system in the fixed-satellite service is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service but not with non-geostationary-satellite systems in other services. Resolution 770 (WRC-19) shall also apply, and No. 22.2 shall continue to apply. (WRC-19)
5.550D	The allocation to the fixed service in the frequency band 38–39.5 GHz is identified for worldwide use by administrations wishing to implement high-altitude platform stations (HAPS). In the HAPS-to-ground direction, the HAPS ground station shall not claim protection from stations in the fixed, mobile and fixed-satellite services; and No. 5.43A does not apply. This identification does not preclude the use of this frequency band by other fixed-service applications or by other services to which this frequency band is allocated on a co-primary basis and does not establish priority in the Radio Regulations. Furthermore, the development of the fixed-satellite, fixed and mobile services shall not be unduly constrained by HAPS. Such use of the fixed-service allocation by HAPS shall be in accordance with the provisions of Resolution 168 (WRC-19). (WRC-19)
5.550E	The use of the frequency bands 39.5–40 GHz and 40–40.5 GHz by non-geostationary-satellite systems in the mobile-satellite service (space-to-Earth) and by non geostationary-satellite systems in the fixed-satellite service (space-to-Earth) is subject to the application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite and mobile-satellite services but not with non-geostationary-satellite systems in other services. No. 22.2 shall continue to apply for non geostationary-satellite-systems. (WRC-19)
5.551H	The equivalent power flux-density (epfd) produced in the frequency band 42.5–43.5 GHz by all space stations in any non-geostationary-satellite system in the fixed-satellite service (space-to-Earth), or in the broadcasting-satellite service operating in the frequency band 42–42.5 GHz, shall not exceed the following values at the site of any radio astronomy station for more than 2% of the time: −230 dB(W/m2) in 1 GHz and −246 dB(W/m2) in any 500 kHz of the frequency band 42.5–43.5 GHz at the site of any radio astronomy station registered as a single-dish telescope; and −209 dB(W/m2) in any 500 kHz of the frequency band 42.5–43.5 GHz at the site of any radio astronomy station registered as a very long baseline interferometry station. These epfd values shall be evaluated using the methodology given in Recommendation ITU R S.1586 1 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU R RA.1631 0 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θmin of the radiotelescope (for which a default value of 5° should be adopted in the absence of notified information).

	These values shall apply at any radio astronomy station that either: – was in operation prior to 5 July 2003 and has been notified to the Bureau before 4 January 2004; or – was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC 03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-15)
5.551I	The power flux-density in the band 42.5–43.5 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth), or the broadcasting-satellite service (space-to-Earth) operating in the 42–42.5 GHz band, shall not exceed the following values at the site of any radio astronomy station: –137 dB(W/m2) in 1 GHz and –153 dB(W/m2) in any 500 kHz of the 42.5–43.5 GHz band at the site of any radio astronomy station registered as a single-dish telescope; and –116 dB(W/m2) in any 500 kHz of the 42.5–43.5 GHz band at the site of any radio astronomy station registered as a very long baseline interferometry station. These values shall apply at the site of any radio astronomy station that either: – was in operation prior to 5 July 2003 and has been notified to the Radiocommunication Bureau before 4 January 2004; or – was notified before the date of receipt of the complete Appendix 4 information for coordination or notification, as appropriate, for the space station to which the limits apply. Other radio astronomy stations notified after these dates may seek an agreement with administrations that have authorized the space stations. In Region 2, Resolution 743 (WRC-03) shall apply. The limits in this footnote may be exceeded at the site of a radio astronomy station of any country whose administration so agreed. (WRC-03)
5.552	The allocation of the spectrum for the fixed-satellite service in the bands 42.5–43.5 GHz and 47.2–50.2 GHz for Earth-to-space transmission is greater than that in the band 37.5–39.5 GHz for space-to-Earth transmission in order to accommodate feeder links to broadcasting satellites. Administrations are urged to take all practicable steps to reserve the band 47.2–49.2 GHz for feeder links for the broadcasting-satellite service operating in the band 40.5–42.5 GHz.
5.552A	The allocation to the fixed service in the frequency bands 47.2–47.5 GHz and 47.9–48.2 GHz is identified for use by high-altitude platform stations (HAPS). This identification does not preclude the use of this frequency band by any application of the services to which it is allocated on a co-primary basis, and does not establish priority in the Radio Regulations. Such use of the fixed-service allocation in the frequency bands 47.2–47.5 GHz and 47.9–48.2 GHz by HAPS shall be in accordance with the provisions of Resolution 122 (Rev.WRC-19). (WRC-19)

5.553	In the bands 43.5–47 GHz and 66–71 GHz, stations in the land mobile service may be operated subject to not causing harmful interference to the space radiocommunication services to which these bands are allocated (see No. 5.43). (WRC-2000)
5.553A	In Algeria, Angola, Bahrain, Belarus, Benin, Botswana, Brazil, Burkina Faso, Cabo Verde, Korea (Rep. of), Côte d'Ivoire, Croatia, United Arab Emirates, Estonia, Eswatini, Gabon, Gambia, Ghana, Greece, Guinea, Guinea-Bissau, Hungary, Iran (Islamic Republic of), Iraq, Jordan, Kuwait, Lesotho, Latvia, Liberia, Lithuania, Madagascar, Malawi, Mali, Morocco, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Oman, Qatar, Senegal, Seychelles, Sierra Leone, Slovenia, Sudan, South Africa, Sweden, Tanzania, Togo, Tunisia, Zambia and Zimbabwe, the frequency band 45.5–47 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT), taking into account No. 5.553. With respect to the aeronautical mobile service and radionavigation service, the use of this frequency band for the implementation of IMT is subject to agreement obtained under No. 9.21 with concerned administrations and shall not cause harmful interference to, or claim protection from these services. This identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations. Resolution 244 (WRC-19) applies. (WRC-19)
5.554	In the bands 43.5–47 GHz, 66–71 GHz, 95–100 GHz, 123–130 GHz, 191.8–200 GHz and 252–265 GHz, satellite links connecting land stations at specified fixed points are also authorized when used in conjunction with the mobile-satellite service or the radionavigation-satellite service. (WRC 2000)
5.554A	The use of the bands 47.5–47.9 GHz, 48.2–48.54 GHz and 49.44–50.2 GHz by the fixed-satellite service (space-to-Earth) is limited to geostationary satellites. (WRC-03)
5.555	Additional allocation: the band 48.94–49.04 GHz is also allocated to the radio astronomy service on a primary basis. (WRC-2000)
5.555B	The power flux-density in the band 48.94–49.04 GHz produced by any geostationary space station in the fixed-satellite service (space-to-Earth) operating in the bands 48.2–48.54 GHz and 49.44–50.2 GHz shall not exceed –151.8 dB(W/m2) in any 500 kHz band at the site of any radio astronomy station. (WRC-03)
5.555C	The use of the frequency band 51.4–52.4 GHz by the fixed-satellite service (Earth-to-space) is limited to geostationary-satellite networks. The earth stations shall be limited to gateway earth stations with a minimum antenna diameter of 2.4 metres. (WRC-19)
5.556	In the bands 51.4–54.25 GHz, 58.2–59 GHz and 64–65 GHz, radio astronomy observations may be carried out under national arrangements. (WRC-2000)
5.556A	"Use of the bands 54.25–56.9 GHz, 57–58.2 GHz and 59–59.3 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth' s surface produced by a station in the inter-satellite service, for all conditions and for all methods of

	modulation, shall not exceed –147 dB(W/m^2 • 100 MHz) for all angles of arrival. (WRC-97)
5.557A	In the band 55.78–56.26 GHz, in order to protect stations in the Earth exploration-satellite service (passive), the maximum power density delivered by a transmitter to the antenna of a fixed service station is limited to –26 dB(W/MHz). (WRC-2000)
5.558	In the bands 55.78–58.2 GHz, 59–64 GHz, 66–71 GHz, 122.25–123 GHz, 130–134 GHz, 167–174.8 GHz and 191.8–200 GHz, stations in the aeronautical mobile service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
5.558A	Use of the band 56.9–57 GHz by inter-satellite systems is limited to links between satellites in geostationary-satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed –147 dB(W/m2 • 100 MHz) for all angles of arrival. (WRC-97)
5.559	In the band 59–64 GHz, airborne radars in the radiolocation service may be operated subject to not causing harmful interference to the inter-satellite service (see No. 5.43). (WRC-2000)
5.559AA	The frequency band 66–71 GHz is identified for use by administrations wishing to implement the terrestrial component of International Mobile Telecommunications (IMT). This identification does not preclude the use of this frequency band by any application of the services to which this frequency band is allocated and does not establish priority in the Radio Regulations. Resolution 241 (WRC-19) applies. (WRC-19)
5.559B	The use of the frequency band 77.5–78 GHz by the radiolocation service shall be limited to short-range radar for ground-based applications, including automotive radars. The technical characteristics of these radars are provided in the most recent version of Recommendation ITU R M.2057. The provisions of No. 4.10 do not apply. (WRC-15)
5.560	In the band 78–79 GHz radars located on space stations may be operated on a primary basis in the earth exploration-satellite service and in the space research service.
5.561	In the band 74–76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service. (WRC-2000)
5.561A	The 81–81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis. (WRC-2000)
5.562	The use of the band 94–94.1 GHz by the Earth exploration-satellite (active) and space research (active) services is limited to spaceborne cloud radars. (WRC-97)
5.562A	In the bands 94–94.1 GHz and 130–134 GHz, transmissions from space stations of the Earth exploration-satellite service (active) that are

	directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible. (WRC-2000)
5.562B	In the frequency bands 105–109.5 GHz, 111.8–114.25 GHz and 217–226 GHz, the use of this allocation is limited to space-based radio astronomy only. (WRC-19)
5.562C	Use of the band 116–122.25 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed –148 dB(W/(m^2 • MHz)) for all angles of arrival. (WRC-2000)
5.562E	The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5–134 GHz. (WRC-2000)
5.562H	Use of the bands 174.8–182 GHz and 185–190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 km to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed –144 dB(W/(m^2 • MHz)) for all angles of arrival. (WRC-2000)
5.563A	In the bands 200–209 GHz, 235–238 GHz, 250–252 GHz and 265–275 GHz, ground-based passive atmospheric sensing is carried out to monitor atmospheric constituents. (WRC-2000)
5.563B	The band 237.9–238 GHz is also allocated to the Earth exploration-satellite service (active) and the space research service (active) for spaceborne cloud radars only. (WRC-2000)
5.564A	For the operation of fixed and land mobile service applications in frequency bands in the range 275–450 GHz: The frequency bands 275–296 GHz, 306–313 GHz, 318–333 GHz and 356–450 GHz are identified for use by administrations for the implementation of land mobile and fixed service applications, where no specific conditions are necessary to protect Earth exploration-satellite service (passive) applications. The frequency bands 296–306 GHz, 313–318 GHz and 333–356 GHz may only be used by fixed and land mobile service applications when specific conditions to ensure the protection of Earth exploration-satellite service (passive) applications are determined in accordance with Resolution 731 (Rev.WRC-19). In those portions of the frequency range 275–450 GHz where radio astronomy applications are used, specific conditions (e.g. minimum separation distances and/or avoidance angles) may be necessary to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis in accordance with Resolution 731 (Rev.WRC-19). The use of the above-mentioned frequency bands by land mobile and fixed service applications does not preclude use by, and does not

	establish priority over, any other applications of radio services in the range of 275–450 GHz. (WRC-19)
5.565	The following frequency bands in the range 275–1 000 GHz are identified for use by administrations for passive service applications: – radio astronomy service: 275–323 GHz, 327–371 GHz, 388–424 GHz, 426–442 GHz, 453–510 GHz, 623–711 GHz, 795–909 GHz and 926–945 GHz; – Earth exploration–satellite service (passive) and space research service (passive): 275–286 GHz, 296–306 GHz, 313–356 GHz, 361–365 GHz, 369–392 GHz, 397–399 GHz, 409–411 GHz, 416–434 GHz, 439–467 GHz, 477–502 GHz, 523–527 GHz, 538–581 GHz, 611–630 GHz, 634–654 GHz, 657–692 GHz, 713–718 GHz, 729–733 GHz, 750–754 GHz, 771–776 GHz, 823–846 GHz, 850–854 GHz, 857–862 GHz, 866–882 GHz, 905–928 GHz, 951–956 GHz, 968–973 GHz and 985–990 GHz. The use of the range 275–1 000 GHz by the passive services does not preclude use of this range by active services. Administrations wishing to make frequencies in the 275–1 000 GHz range available for active service applications are urged to take all practicable steps to protect these passive services from harmful interference until the date when the Table of Frequency Allocations is established in the above-mentioned 275–1 000 GHz frequency range. All frequencies in the range 1 000–3 000 GHz may be used by both active and passive services. (WRC-12)