REPUBLIC OF POLAND

NATIONAL FREQUENCY ALLOCATION TABLE

INTRODUCED BY THE ORDER OF THE COUNCIL OF MINISTERS

of the 29th June 2005 r.

EFFECTIVE ON 5TH AUGUST 2005

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REPUBLIC OF POLAND

NATIONAL FREQUENCY ALLOCATION TABLE

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
1	Below 9 kHz		(Not allocated) 5.53 5.54	
2	9	14	RADIONAVIGATION	civil-government
3	14,00	19,95	FIXED MARITIME MOBILE 5.57 5.56	civil-government civil-government
4	19,95	20,05	STANDARD FREQUENCY AND TIME SIGNAL (20 kHz)	civil
5	20,05	70,00	FIXED MARITIME MOBILE 5.57 5.56	civil-government civil-government
6	70	72	RADIONAVIGATION 5.60	government
7	72	84	FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.60 5.56	civil-government civil-government government
8	84	86	RADIONAVIGATION 5.60	civil-government
9	86	90	FIXED MARITIME MOBILE 5.57 RADIONAVIGATION 5.56	civil-government civil-government government
10	90	110	RADIONAVIGATION 5.62 Fixed 5.64	civil-government civil-government
11	110	112	FIXED MARITIME MOBILE RADIONAVIGATION 5.64	civil civil-government civil
12	112	115	RADIONAVIGATION 5.60	civil-government
13	115,0	117,6	RADIONAVIGATION 5.60 Fixed Maritime mobile 5.64	civil-government civil-government civil-government
14	117,6	126,0	FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	civil-government civil-government civil-government
15	126	129	RADIONAVIGATION 5.60	civil-government
16	129	130	FIXED MARITIME MOBILE RADIONAVIGATION 5.60 5.64	civil-government civil-government civil-government
17	130,0	148,5	FIXED MARITIME MOBILE 5.64 POL.1	civil-government civil-government
18	148,5	255,0	BROADCASTING	civil
19	255,0	283,5	AERONAUTICAL RADIONAVIGATION BROADCASTING	civil-government civil

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
20	283,5	315,0	AERONAUTICAL RADIONAVIGATION MARITIME RADIONAVIGATION (radiobeacons) 5.73 5.74	civil-government civil-government
21	315	325	AERONAUTICAL RADIONAVIGATION Maritime radionavigation (radiobeacons) 5.73	civil-government civil-government
22	325	405	AERONAUTICAL RADIONAVIGATION	civil-government
23	405	415	RADIONAVIGATION 5.76	civil-government
24	415	435	MARITIME MOBILE 5.79 AERONAUTICAL RADIONAVIGATION	civil-government civil-government
25	435	495	MARITIME MOBILE 5.79 5.79A Aeronautical radionavigation 5.82	civil-government civil-government
26	495	505	MOBILE (distress and calling) 5.83	civil-government
27	505,0	526,5	MARITIME MOBILE 5.79 5.79A 5.84 AERONAUTICAL RADIONAVIGATION	civil-government civil-government
28	526,5	1606,5	BROADCASTING	civil
29	1 606,5	1 625,0	FIXED LAND MOBILE MARITIME MOBILE 5.90	civil-government civil-government civil-government
30	1 625	1 635	FIXED 5.93 LAND MOBILE 5.93 RADIOLOCATION	government government civil-government
31	1 635	1 800	FIXED LAND MOBILE MARITIME MOBILE 5.90	civil-government civil-government civil-government
32	1 800	1 810	FIXED 5.93 LAND MOBILE 5.93 RADIOLOCATION	government government civil-government
33	1 810	1 850	AMATEUR 5.100	civil
34	1 850	2 000	FIXED MOBILE except aeronautical mobile AMATEUR 5.96 5.103	civil-government civil-government civil
35	2 000	2 025	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
36	2 025	2 045	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
37	2 045	2 160	FIXED LAND MOBILE MARITIME MOBILE	civil-government civil-government civil-government
38	2 160	2 170	FIXED 5.93 LAND MOBILE 5.93 RADIOLOCATION	government government civil-government
39	2 170,0	2 173,5	MARITIME MOBILE	civil-government
40	2 173,5	2 190,5	MOBILE (distress and calling) 5.108 5.109 5.110 5.111	civil-government
41	2 190,5	2 194,0	MARITIME MOBILE	civil-government

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
42	2 194	2 300	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
43	2 300	2 498	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
44	2 498	2 501	STANDARD FREQUENCY AND TIME SIGNAL (2500 kHz)	civil
45	2 501	2 502	STANDARD FREQUENCY AND TIME SIGNAL Space research	civil civil
46	2 502	2 625	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
47	2 625	2 650	MARITIME MOBILE MARITIME RADIONAVIGATION	civil-government civil-government
48	2 650	2 850	FIXED MOBILE except aeronautical mobile (R) 5.103	civil-government civil-government
49	2 850	3 025	AERONAUTICAL MOBILE (R) 5.111 5.115	civil-government
50	3 025	3 155	AERONAUTICAL MOBILE (OR)	government
51	3 155	3 200	FIXED MOBILE except aeronautical mobile (R) 5.116	civil-government civil-government
52	3 200	3 230	FIXED MOBILE except aeronautical mobile (R) 5.116	civil-government civil-government
53	3 230	3 400	FIXED MOBILE except aeronautical mobile 5.116	civil-government civil-government
54	3 400	3 500	AERONAUTICAL MOBILE (R)	civil-government
55	3 500	3 800	FIXED MOBILE except aeronautical mobile AMATEUR	civil-government civil-government civil
56	3 800	3 900	FIXED LAND MOBILE AERONAUTICAL MOBILE (OR)	civil-government civil-government government
57	3 900	3 950	AERONAUTICAL MOBILE (OR)	government
58	3 950	4 000	FIXED BROADCASTING	civil-government civil
59	4 000	4 063	FIXED MARITIME MOBILE 5.127	civil-government civil-government
60	4 063	4 438	FIXED 5.129 MARITIME MOBILE 5.79A 5.109 5.110 5.130 5.131 5.132	government civil-government
61	4 438	4 650	FIXED MOBILE except aeronautical mobile (R)	civil-government civil-government
62	4 650	4 700	AERONAUTICAL MOBILE (R)	civil-government
63	4 700	4 750	AERONAUTICAL MOBILE (OR)	government
64	4 750	4 850	FIXED LAND MOBILE AERONAUTICAL MOBILE (OR)	civil-government civil-government government
65	4 850	4 995	FIXED LAND MOBILE	civil-government civil-government

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
66	4 995	5 003	STANDARD FREQUENCY AND TIME SIGNAL (5000 kHz)	civil
67	5 003	5 005	STANDARD FREQUENCY AND TIME SIGNAL Space research	civil civil
68	5 005	5 060	FIXED	civil-government
69	5 060	5 250	FIXED Mobile except aeronautical mobile	civil-government civil-government
70	5 250	5 450	FIXED MOBILE except aeronautical mobile	civil-government civil-government
71	5 450	5 480	FIXED LAND MOBILE AERONAUTICAL MOBILE (OR)	civil-government civil-government government
72	5 480	5 680	AERONAUTICAL MOBILE (R) 5.111 5.115	civil-government
73	5 680	5 730	AERONAUTICAL MOBILE (OR) 5.111 5.115	government
74	5 730	5 900	FIXED LAND MOBILE	civil-government civil-government
75	5 900	5 950	FIXED 5.136 LAND MOBILE 5.136 BROADCASTING 5.134	civil-government civil-government civil
76	5 950	6 200	BROADCASTING	civil
77	6 200	6 525	MARITIME MOBILE 5.109 5.110 5.130 5.132 5.137	civil-government
78	6 525	6 685	AERONAUTICAL MOBILE (R)	civil-government
79	6 685	6 765	AERONAUTICAL MOBILE (OR)	government
80	6 765	7 000	FIXED MOBILE except aeronautical mobile (R) 5.138 5.138A	civil-government civil-government
81	7 000	7 100	AMATEUR AMATEUR-SATELLITE	civil civil
82	7 100	7 200	BROADCASTING 5.141C AMATEUR	civil civil
83	7 200	7 300	BROADCASTING	civil
84	7 300	7 400	FIXED 5.143 5.143B BROADCASTING 5.134 Land mobile 5.143 5.143B	government civil government
85	7 400	7 450	FIXED 5.143B BROADCASTING Land mobile 5.143B	government civil government
86	7 450	8 100	FIXED MOBILE except aeronautical mobile (R) 5.143E	civil-government civil-government
87	8 100	8 195	FIXED MARITIME MOBILE	civil-government civil-government
88	8 195	8 815	MARITIME MOBILE 5.109 5.110 5.132 5.145 5.111	civil-government
89	8 815	8 965	AERONAUTICAL MOBILE (R)	civil-government
90	8 965	9 040	AERONAUTICAL MOBILE (OR)	government
91	9 040	9 400	FIXED	government
92	9 400	9 500	FIXED 5.146 BROADCASTING 5.134	government civil

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
93	9 500	9 900	FIXED 5.147 BROADCASTING	government civil
94	9 900	9 995	FIXED	government
95	9 995	10 003	STANDARD FREQUENCY AND TIME SIGNAL (10 000 kHz) 5.111	civil
96	10 003	10 005	STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111	civil civil
97	10 005	10 100	AERONAUTICAL MOBILE (R) 5.111	civil-government
98	10 100	10 150	FIXED Amateur	civil-government civil
99	10 150	11 175	FIXED Mobile except aeronautical mobile (R)	civil-government civil-government
100	11 175	11 275	AERONAUTICAL MOBILE (OR)	government
101	11 275	11 400	AERONAUTICAL MOBILE (R)	civil-government
102	11 400	11 600	FIXED	civil-government
103	11 600	11 650	FIXED 5.146 BROADCASTING 5.134	government civil
104	11 650	12 050	BROADCASTING 5.147	civil
105	12 050	12 100	FIXED 5.146 BROADCASTING 5.134	government civil
106	12 100	12 230	FIXED	civil-government
107	12 230	13 200	MARITIME MOBILE 5.109 5.110 5.132 5.145	civil-government
108	13 200	13 260	AERONAUTICAL MOBILE (OR)	government
109	13 260	13 360	AERONAUTICAL MOBILE (R)	civil-government
110	13 360	13 410	FIXED RADIO ASTRONOMY 5.149	government civil
111	13 410	13 570	FIXED Mobile except aeronautical mobile (R) 5.150	civil-government civil-government
112	13 570	13 600	FIXED 5.151 BROADCASTING 5.134 Mobile except aeronautical mobile (R) 5.151	civil-government civil civil-government
113	13 600	13 800	BROADCASTING	civil
114	13 800	13 870	FIXED 5.151 BROADCASTING 5.134 Mobile except aeronautical mobile (R) 5.151	government civil government
115	13 870	14 000	FIXED Mobile except aeronautical mobile (R)	civil-government civil-government
116	14 000	14 250	AMATEUR AMATEUR-SATELLITE	civil civil
117	14 250	14 350	AMATEUR	civil
118	14 350	14 990	FIXED Mobile except aeronautical mobile (R)	civil-government civil-government
119	14 990	15 005	STANDARD FREQUENCY AND TIME SIGNAL (15 000 kHz) 5.111	civil
120	15 005	15 010	STANDARD FREQUENCY AND TIME SIGNAL Space research	civil civil
121	15 010	15 100	AERONAUTICAL MOBILE (OR)	government

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
122	15 100	15 600	BROADCASTING	civil
123	15 600	15 800	FIXED 5.146 BROADCASTING 5.134	civil-government civil
124	15 800	16 360	FIXED	civil-government
125	16 360	17 410	MARITIME MOBILE 5.109 5.110 5.132 5.145	civil-government
126	17 410	17 480	FIXED	civil-government
127	17 480	17 550	FIXED 5.146 BROADCASTING 5.134	government civil
128	17 550	17 900	BROADCASTING	civil
129	17 900	17 970	AERONAUTICAL MOBILE (R)	civil-government
130	17 970	18 030	AERONAUTICAL MOBILE (OR)	government
131	18 030	18 052	FIXED	government
132	18 052	18 068	FIXED Space research	government civil
133	18 068	18 168	AMATEUR AMATEUR-SATELLITE	civil civil
134	18 168	18 780	FIXED Mobile except aeronautical mobile	civil-government civil-government
135	18 780	18 900	MARITIME MOBILE	civil-government
136	18 900	19 020	FIXED 5.146 BROADCASTING 5.134	government civil
137	19 020	19 680	FIXED	government
138	19 680	19 800	MARITIME MOBILE 5.132	civil-government
139	19 800	19 990	FIXED	government
140	19 990	19 995	STANDARD FREQUENCY AND TIME SIGNAL Space research 5.111	civil civil
141	19 995	20 010	STANDARD FREQUENCY AND TIME SIGNAL (20 000 kHz) 5.111	civil
142	20 010	21 000	FIXED Mobile	civil-government civil-government
143	21 000	21 450	AMATEUR AMATEUR-SATELLITE	civil civil
144	21 450	21 850	BROADCASTING	civil
145	21 850	21 870	FIXED	civil-government
146	21 870	21 924	FIXED 5.155B	civil-government
147	21 924	22 000	AERONAUTICAL MOBILE (R)	civil-government
148	22 000	22 855	MARITIME MOBILE 5.132	civil-government
149	22 855	23 000	FIXED	civil-government
150	23 000	23 200	FIXED Mobile except aeronautical mobile (R)	civil-government civil-government
151	23 200	23 350	AERONAUTICAL MOBILE (OR)	government
152	23 350	24 000	FIXED MOBILE except aeronautical mobile 5.157	civil-government civil-government
153	24 000	24 890	FIXED LAND MOBILE	civil-government civil-government
154	24 890	24 990	AMATEUR AMATEUR-SATELLITE	civil civil
155	24 990	25 005	STANDARD FREQUENCY AND TIME SIGNAL (25 000 kHz)	civil

Pos.	f_{lower} (kHz)	f_{upper} (kHz)	Allocation	Usage
156	25 005	25 010	STANDARD FREQUENCY AND TIME SIGNAL Space research	civil civil
157	25 010	25 070	FIXED MOBILE except aeronautical mobile	government government
158	25 070	25 210	MARITIME MOBILE	civil-government
159	25 210	25 550	FIXED MOBILE except aeronautical mobile	government government
160	25 550	25 670	RADIO ASTRONOMY 5.149	civil
161	25 670	26 100	BROADCASTING	civil
162	26 100	26 175	MARITIME MOBILE 5.132	civil-government
163	26 175	27 500	FIXED MOBILE except aeronautical mobile 5.150	civil-government civil-government
164	27 500	28 000	FIXED MOBILE METEOROLOGICAL AIDS	government government civil-government
165	28 000	29 700	AMATEUR AMATEUR-SATELLITE	civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
166	29,700	30,005	MOBILE	civil-government
167	30,005	30,010	MOBILE	civil-government
168	30,01	33,00	MOBILE POL.22	government
169	33,0	37,5	MOBILE	civil-government
170	37,50	38,25	MOBILE Radio astronomy 5.149	civil-government civil
171	38,25	39,40	MOBILE	civil-government
172	39,400	39,986	FIXED MOBILE	government government
173	39,986	40,020	FIXED MOBILE Space research	government government civil
174	40,02	40,98	MOBILE 5.150	civil-government
175	40,980	41,015	MOBILE Space research	civil-government civil
176	41,015	44,00	MOBILE	government
177	44	45	MOBILE 5.162A	government
178	45	47	MOBILE 5.162A	government
179	47	48	LAND MOBILE 5.164 5.162A	government
180	48	50	LAND MOBILE 5.164 5.162A POL.23	civil-government
181	50	52	LAND MOBILE 5.164 Amateur POL.30 5.162A	government civil
182	52	68	LAND MOBILE 5.164 5.162A POL.31	government
183	68,0	69,2	MOBILE except aeronautical mobile	civil
184	69,2	69,9	MOBILE except aeronautical mobile	government
185	69,9	73,3	MOBILE except aeronautical mobile 5.149	civil
186	73,3	74,1	MOBILE except aeronautical mobile 5.149	government
187	74,1	74,8	MOBILE except aeronautical mobile 5.149	civil-government
188	74,8	75,2	AERONAUTICAL RADIONAVIGATION 5.180	civil-government
189	75,2	77,5	MOBILE except aeronautical mobile	government
190	77,5	79,0	MOBILE except aeronautical mobile	civil-government
191	79,0	79,7	MOBILE except aeronautical mobile	government
192	79,7	85,0	MOBILE except aeronautical mobile	civil-government
193	85,0	87,5	MOBILE except aeronautical mobile	government
194	87,5	108	BROADCASTING	civil
195	108,000	117,975	AERONAUTICAL RADIONAVIGATION 5.197A	civil-government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
196	117,975	121,450	AERONAUTICAL MOBILE (R) POL.6 AERONAUTICAL MOBILE (OR) POL.22 5.198	civil-government government
197	121,45	121,55	AERONAUTICAL MOBILE MOBILE-SATELLITE 5.199 5.111 5.198 5.200	civil-government civil-government
198	121,55	136,00	AERONAUTICAL MOBILE (R) POL.6 AERONAUTICAL MOBILE (OR) 5.201 POL.22 5.198 5.200	civil-government government
199	136	137	AERONAUTICAL MOBILE (R) POL.6 AERONAUTICAL MOBILE (OR) 5.202 POL.22 5.198	civil-government government
200	137,000	137,025	AERONAUTICAL MOBILE (OR) 5.206 METEOROLOGICAL-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.209 POL.7 Space research (space-to-Earth) Space operations (space-to-Earth) 5.208	government civil civil civil civil
201	137,025	137,175	AERONAUTICAL MOBILE (OR) 5.206 METEOROLOGICAL-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.209 POL.7 Space research (space-to-Earth) Space operations (space-to-Earth) 5.208	government civil civil civil civil
202	137,175	137,825	AERONAUTICAL MOBILE (OR) 5.206 METEOROLOGICAL-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.209 POL.7 Space research (space-to-Earth) Space operations (space-to-Earth) 5.208	government civil civil civil civil
203	137,825	138,000	AERONAUTICAL MOBILE (OR) 5.206 METEOROLOGICAL-SATELLITE (space-to-Earth) Mobile-satellite (space-to-Earth) 5.208A 5.209 POL.7 Space research (space-to-Earth) Space operations (space-to-Earth) 5.208	government civil civil civil civil
204	138,0	143,6	AERONAUTICAL MOBILE (OR)	government
205	143,60	143,65	AERONAUTICAL MOBILE (OR) Space research (space-to-Earth)	government civil
206	143,65	144,00	AERONAUTICAL MOBILE (OR)	government
207	144	146	AMATEUR AMATEUR-SATELLITE	civil civil
208	146,0	147,8	MOBILE except aeronautical mobile (R)	government
209	147,800	147,975	MOBILE except aeronautical mobile (R)	civil
210	147,975	148,000	FIXED MOBILE except aeronautical mobile (R)	government government
211	148,0	149,9	FIXED MOBILE except aeronautical mobile (R) Mobile-satellite (Earth-to-space) 5.209 POL.8 5.218 5.219 5.221	government government civil
212	149,90	150,05	MOBILE MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.224B 5.220 5.222 5.223	government civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
213	150,050	151,625	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	civil civil
214	151,625	151,775	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	government civil
215	151,775	153,000	MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	civil civil
216	153,0	154,4	MOBILE except aeronautical mobile (R) POL.25	civil
217	154,4	156,0	MOBILE except aeronautical mobile (R) POL.25	civil-government
218	156,0000	156, 7625	MOBILE except aeronautical mobile (R) 5.226 5.227 POL.25	civil-government
219	156, 7625	156, 8375	MARITIME MOBILE (distress and calling) 5.111 5.226	civil-government
220	156,8375	157,450	MOBILE except aeronautical mobile 5.226 POL.25	civil-government
221	157,450	157,950	FIXED MOBILE except aeronautical mobile POL.25	government government
222	157,950	158,575	FIXED MOBILE except aeronautical mobile POL.25	civil civil
223	158,575	158,950	FIXED MOBILE except aeronautical mobile POL.25	government government
224	158,95	159,20	FIXED MOBILE except aeronautical mobile POL.25	civil civil
225	159,20	159,40	FIXED MOBILE except aeronautical mobile POL.25	government government
226	159,4	159,9	MOBILE except aeronautical mobile POL.25	civil
227	159,900	160,975	FIXED MOBILE except aeronautical mobile 5.226 POL.25	civil-government civil-government
228	160,975	161,475	FIXED MOBILE except aeronautical mobile POL.25	government government
229	161,475	164,500	FIXED MOBILE except aeronautical mobile 5.226 POL.25	civil-government civil-government
230	164,5	167,5	FIXED MOBILE except aeronautical mobile POL.25	government government
231	167,50	169,15	FIXED MOBILE except aeronautical mobile POL.25	civil-government civil-government
232	169,150	169,825	FIXED MOBILE except aeronautical mobile POL.25	government government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
233	169,825	172,000	FIXED MOBILE except aeronautical mobile POL.25	civil-government civil-government
234	172	174	FIXED MOBILE except aeronautical mobile POL.25	government government
235	174	225	BROADCASTING	civil
236	225	230	BROADCASTING Fixed Mobile	civil government government
237	230	235	FIXED MOBILE	government government
238	235,00	242,95	FIXED MOBILE MOBILE-SATELLITE 5.254	government government government
239	242,95	243,05	AERONAUTICAL MOBILE MOBILE-SATELLITE (Earth-to-space) 5.254 5.111 5.199 5.256	civil-government civil-government
240	243,05	267,00	FIXED MOBILE MOBILE-SATELLITE 5.254	government government government
241	267	322	FIXED MOBILE MOBILE-SATELLITE 5.254 5.255	government government government
242	322,0	328,6	FIXED MOBILE RADIO ASTRONOMY 5.149	government government civil
243	328,6	335,4	AERONAUTICAL RADIONAVIGATION 5.258	civil-government
244	335,4	399,9	FIXED MOBILE MOBILE-SATELLITE 5.208A 5.254 5.255	government government government
245	399,90	400,05	MOBILE-SATELLITE (Earth-to-space) 5.209 5.224A RADIONAVIGATION-SATELLITE 5.222 5.224B Mobile 5.220 5.260	civil-government civil government
246	400,05	400,15	STANDARD FREQUENCY AND TIME SIGNAL (400,1 MHz) 5.261 POL.10	civil
247	400,15	401,00	MOBILE-SATELLITE (space-to-Earth) 5.208A 5.209 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) 5.263 Space operations (space-to-Earth) 5.264 POL.10	civil civil-government civil civil civil
248	401	402	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) Fixed	civil-government civil civil government
249	402	403	METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) Fixed Mobile except aeronautical mobile	civil-government civil civil government civil-government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
250	403	406	METEOROLOGICAL AIDS Fixed Mobile except aeronautical mobile	civil-government civil-government civil-government
251	406,0	406,1	MOBILE-SATELLITE (Earth-to-space) 5.266 5.267	civil
252	406,1	410,0	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	civil-government civil-government civil
253	410	412	MOBILE except aeronautical mobile	government
254	412	414	MOBILE except aeronautical mobile	civil
255	414	420	MOBILE except aeronautical mobile	civil
256	420	422	MOBILE except aeronautical mobile	government
257	422	424	MOBILE except aeronautical mobile Radiolocation	civil government
258	424	430	MOBILE except aeronautical mobile Radiolocation	civil government
259	430	432	FIXED 5.277 RADIOLOCATION AMATEUR	civil-government government civil
260	432,00	433,05	FIXED 5.277 RADIOLOCATION AMATEUR	civil-government government civil
261	433,05	434,79	FIXED 5.277 RADIOLOCATION AMATEUR Land mobile 5.138	civil-government government civil civil-government
262	434,79	438,00	FIXED 5.277 RADIOLOCATION AMATEUR AMATEUR-SATELLITE 5.282	civil-government government civil civil
263	438	440	FIXED 5.277 RADIOLOCATION AMATEUR	civil-government government civil
264	440	446	FIXED MOBILE except aeronautical mobile Radiolocation	government government government
265	446,0	446,1	FIXED MOBILE except aeronautical mobile Radiolocation	government civil government
266	446,1	448,0	FIXED MOBILE except aeronautical mobile Radiolocation	government government government
267	448	450	FIXED MOBILE except aeronautical mobile Radiolocation	civil civil government
268	450,0	452,5	FIXED MOBILE	government government
269	452,5	457,0	FIXED MOBILE	civil-government civil
270	457	460	FIXED MOBILE POL.23 5.287	civil-government civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
271	460,0	462,5	FIXED MOBILE 5.289	government government
272	462,5	467,0	FIXED MOBILE 5.289	civil-government civil
273	467,0	469,7	FIXED MOBILE 5.287 5.289	civil-government civil
274	469,7	470,0	FIXED 5.289 POL.23	civil-government
275	470	646	BROADCASTING Mobile Radio astronomy 5.306 5.149 5.311	civil civil civil
276	646	686	AERONAUTICAL RADIONAVIGATION 5.312 BROADCASTING Mobile 5.311	government civil civil
277	686	734	BROADCASTING Mobile 5.311	civil civil
278	734	750	ARONAUTICAL RADIONAVIGATION 5.312 BROADCASTING Mobile 5.311	government civil civil
279	750	790	BROADCASTING Mobile 5.311	civil civil
280	790	814	ARONAUTICAL RADIONAVIGATION 5.312 BROADCASTING Fixed Mobile	government civil government civil
281	814	824	BROADCASTING Fixed Mobile	civil government civil
282	824	830	FIXED BROADCASTING Fixed Mobile	civil civil government civil
283	830	838	ARONAUTICAL RADIONAVIGATION 5.312 BROADCASTING Fixed Mobile	government civil government civil
284	838	846	FIXED BROADCASTING Mobile	civil-government civil civil-government
285	846	862	FIXED AERONAUTICAL RADIONAVIGATION 5.312 BROADCASTING	government government civil
286	862	870	FIXED POL.33 POL.34 MOBILE except aeronautical mobile POL.32 AERONAUTICAL RADIONAVIGATION 5.323	government government government
287	870	876	FIXED MOBILE except aeronautical mobile 5.317A	civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
288	876	880	MOBILE except aeronautical mobile POL.35	government
289	880	883,5	FIXED MOBILE except aeronautical mobile POL.36	government government
290	883,5	890	FIXED MOBILE except aeronautical mobile 5.317A	civil civil
291	890	915	MOBILE except aeronautical mobile 5.317A Radiolocation POL.12	civil government
292	915	921	FIXED MOBILE except aeronautical mobile 5.317A Radiolocation POL.12	civil civil government
293	921	925	MOBILE except aeronautical mobile POL.35 AERONAUTICAL RADIONAVIGATION 5.323 Radiolocation POL.12	government government government
294	925	935	AERONAUTICAL RADIONAVIGATION 5.323 Radiolocation POL.12	government government
295	935	942	MOBILE except aeronautical mobile 5.317A Radiolocation POL.12	civil government
296	942	960	MOBILE except aeronautical mobile 5.317A	civil
297	960	1 215	AERONAUTICAL RADIONAVIGATION 5.328 5.328A 5.328B POL.29	civil-government
298	1 215	1 240	RADIONAVIGATION 5.331 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.332	government civil-government government civil civil
299	1 240	1 260	RADIONAVIGATION 5.331 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur 5.332	government civil-government government civil civil civil
300	1 260	1 270	RADIONAVIGATION 5.331 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur Amateur-satellite 5.282 5.335A	government civil-government government civil civil civil civil
301	1 270	1 300	RADIONAVIGATION 5.331 RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329 5.329A RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Amateur 5.335A	government civil-government government civil civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
302	1 300	1 350	AERONAUTICAL RADIONAVIGATION 5.337 RADIONAVIGATION-SATELLITE (Earth-to-space) RADIOLOCATION 5.149 5.337A	civil-government civil-government civil-government
303	1 350	1 400	FIXED MOBILE RADIOLOCATION 5.149 5.339 5.339A	government government civil-government
304	1 400	1 427	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341	civil civil civil
305	1 427	1 429	FIXED MOBILE except aeronautical mobile SPACE OPERATIONS (Earth-to-space) 5.341 POL.25	government government civil
306	1 429	1 452	FIXED MOBILE except aeronautical mobile 5.339A 5.341 POL.25	government government
307	1 452	1 492	BROADCASTING 5.345 BROADCASTING-SATELLITE 5.345 Fixed POL.15 5.341 5.347A	civil civil government
308	1 492	1 518	FIXED MOBILE except aeronautical mobile 5.341	government government
309	1 518	1 525	FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (space-to-Earth) 5.348 5.348A 5.348C 5.341	government government civil
310	1 525	1 530	FIXED MOBILE-SATELLITE (space-to-Earth) 5.351A SPACE OPERATIONS (space-to-Earth) Mobile except aeronautical mobile 5.341 5.347A 5.351 5.354	government civil civil government
311	1 530	1 535	MOBILE-SATELLITE (space-to-Earth) 5.351A 5.353A SPACE OPERATIONS (space-to-Earth) Fixed Mobile except aeronautical mobile Earth exploration-satellite 5.341 5.347A 5.351 5.354	civil civil government government civil
312	1 535	1 544	MOBILE-SATELLITE (space-to-Earth) 5.351A 5.353A 5.341 5.347A 5.351 5.354	civil
313	1 544	1 545	MOBILE-SATELLITE (space-to-Earth) 5.341 5.347A 5.354 5.356	civil
314	1 545	1 555	FIXED 5.359 MOBILE-SATELLITE (space-to-Earth) 5.351A 5.341 5.347A 5.351 5.354 5.357 5.357A	government civil
315	1 555	1 559	FIXED 5.359 MOBILE-SATELLITE (space-to-Earth) 5.351A 5.341 5.347A 5.351 5.354	government civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
316	1 559	1 610	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.329A Fixed 5.362B 5.341	civil-government civil-government government
317	1 610,0	1 610,6	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION 5.341 5.364 5.366 5.367 5.368 5.371 5.372	government civil-government civil-government
318	1 610,6	1 613,8	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION RADIO ASTRONOMY 5.149 5.341 5.364 5.366 5.367 5.368 5.371 5.372	government civil-government civil-government civil
319	1 613,8	1 626,5	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A AERONAUTICAL RADIONAVIGATION Mobile-satellite (space-to-Earth) 5.347A 5.341 5.364 5.365 5.366 5.367 5.368 5.371	government civil-government civil-government civil-government
320	1 626,5	1 645,5	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.374	government civil
321	1 645,5	1 646,5	MOBILE-SATELLITE (Earth-to-space) 5.341 5.354 5.375	civil
322	1 646,5	1 656,5	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.354 5.357A 5.376	government civil
323	1 656,5	1 660,0	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.354 5.374	government civil
324	1 660,0	1 660,5	FIXED 5.359 MOBILE-SATELLITE (Earth-to-space) 5.351A RADIO ASTRONOMY 5.149 5.341 5.351 5.354 5.376A	government civil civil
325	1 660,5	1 668,0	RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A	civil civil government government
326	1 668,0	1 668,4	MOBILE-SATELLITE (Earth-to-space) 5.348C 5.379B 5.379C RADIO ASTRONOMY SPACE RESEARCH (passive) Fixed Mobile except aeronautical mobile 5.149 5.341 5.379A 5.379D	civil-government civil civil government government
327	1 668,4	1 670,0	FIXED MOBILE except aeronautical mobile MOBILE-SATELLITE (Earth-to-space) 5.348C 5.379B 5.379C RADIO ASTRONOMY 5.149 5.341 5.379D	government government civil-government civil
328	1 670	1 675	FIXED MOBILE 5.380 MOBILE-SATELLITE (Earth-to-space) 5.348C 5.379B METEOROLOGICAL-SATELLITE (space-to-Earth) 5.341 5.379D	government civil-government civil-government civil-government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
329	1 675	1 690	FIXED MOBILE except aeronautical mobile METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.341	government government civil-government civil-government
330	1 690	1 700	FIXED 5.382 MOBILE except aeronautical mobile 5.382 METEOROLOGICAL AIDS METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341	government government civil-government civil-government
331	1 700	1 710	FIXED MOBILE except aeronautical mobile METEOROLOGICAL-SATELLITE (space-to-Earth) 5.289 5.341	civil-government government civil-government
332	1 710	1 730	FIXED MOBILE 5.384A 5.149 5.341 5.385	civil civil
333	1 730	1 755	FIXED MOBILE 5.384A	government government
334	1 755	1 785	MOBILE 5.384A	civil
335	1 785	1 800	FIXED MOBILE 5.384A	civil-government civil-government
336	1 800	1 805	FIXED MOBILE 5.380 5.384A	civil-government civil
337	1 805	1 825	FIXED MOBILE 5.384A	civil civil
338	1 825	1 850	FIXED MOBILE 5.384A	government government
339	1 850	1 880	MOBILE 5.384A	civil
340	1 880	1 885	FIXED MOBILE 5.384A	civil-government civil
341	1 885	1 900	FIXED MOBILE 5.388A 5.388	civil-government civil
342	1 900	1 980	FIXED MOBILE 5.388A 5.388	civil civil
343	1 980	2 010	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A	government government civil
344	2 010	2 015	MOBILE 5.388A 5.388 POL.20	civil-government
345	2 015	2 025	FIXED MOBILE 5.388A 5.388	civil civil
346	2 025	2 110	FIXED MOBILE 5.391 EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space) SPACE OPERATIONS (Earth-to-space) (space-to-space) 5.392 POL.25	civil government civil civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
347	2 110	2 120	FIXED MOBILE 5.388A SPACE RESEARCH (deep space) (Earth-to-space) 5.388	civil civil civil
348	2 120	2 170	FIXED MOBILE 5.388A 5.388	civil civil
349	2 170	2 200	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A 5.388 5.389A POL.25	government government civil
350	2 200	2 290	FIXED MOBILE 5.391 EARTH EXPLORATION-SATELLITE (space-to-Earth) (space-to-space) SPACE RESEARCH (space-to-Earth) (space-to-space) SPACE OPERATIONS (space-to-Earth) (space-to-space) 5.392 POL.25	civil-government civil-government civil civil civil
351	2 290	2 300	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (deep space) (space-to-Earth) POL.25	civil-government civil-government civil
352	2 300	2 400	FIXED MOBILE Radiolocation Amateur POL.25	civil-government civil-government government civil
353	2 400	2 450	FIXED MOBILE Radiolocation Amateur 5.150	civil-government civil-government government civil
354	2 450	2 464	FIXED MOBILE 5.150	civil-government civil-government
355	2 464,0	2 483,5	FIXED MOBILE Radiolocation 5.150	civil-government civil-government government
356	2 483,5	2 500,0	FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A Radiolocation 5.150 5.371 5.398 5.399 5.402	government government civil government
357	2 500	2 520	FIXED 5.409 5.410 5.411 MOBILE except aeronautical mobile 5.384A MOBILE-SATELLITE (space-to-Earth) 5.351A 5.403 5.414 POL.21	civil civil civil
358	2 520	2 655	FIXED 5.409 5.410 5.411 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 5.339 5.403 5.417C 5.417D 5.418B 5.418C POL.21 POL.25	civil civil civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
359	2 655	2 670	FIXED 5.409 5.410 5.411 MOBILE except aeronautical mobile 5.384A BROADCASTING-SATELLITE 5.413 5.416 Radio astronomy Earth exploration-satellite (passive) Space research (passive) 5.149 5.347A 5.420 POL.21 POL.25	civil civil civil civil civil civil
360	2 670	2 690	FIXED 5.409 5.410 5.411 MOBILE except aeronautical mobile 5.384A MOBILE-SATELLITE (Earth-to-space) 5.351A Radio astronomy 5.149 5.347A 5.419 5.420 POL.21 POL.25	civil-government civil civil civil
361	2 690	2 700	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
362	2 700	2 900	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation 5.423	civil-government civil-government
363	2 900	3 100	RADIONAVIGATION 5.426 RADIOLOCATION 5.424A 5.425 5.427 POL.22	government government
364	3 100	3 300	RADIOLOCATION 5.149	government
365	3 300	3 400	RADIOLOCATION 5.149	government
366	3 400	3 500	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation	civil civil civil government
367	3 500	3 600	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation	civil civil civil government
368	3 600	4 200	FIXED FIXED-SATELLITE (space-to-Earth)	civil civil
369	4 200	4 400	AERONAUTICAL RADIONAVIGATION 5.438 5.440	civil-government
370	4 400	4 800	FIXED MOBILE	government government
371	4 800	4 990	FIXED MOBILE 5.442 Radio astronomy 5.149 5.339	government government civil
372	4 990	5 000	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY 5.149	government government civil
373	5 000	5 010	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (Earth-to-space) 5.367	civil-government civil-government
374	5 010	5 030	AERONAUTICAL RADIONAVIGATION RADIONAVIGATION-SATELLITE (space-to-Earth) (space-to-space) 5.328B 5.443B 5.367	civil-government civil-government
375	5 030	5 150	AERONAUTICAL RADIONAVIGATION 5.367 5.443B 5.444 5.444A	civil-government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
376	5 150	5 250	FIXED-SATELLITE (Earth-to-space) 5.447A MOBILE except aeronautical mobile 5.446A 5.446B AERONAUTICAL RADIONAVIGATION 5.446 5.447B 5.447C	civil civil government
377	5 250	5 255	MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH 5.447D 5.448A	civil government civil civil
378	5 255	5 350	MOBILE except aeronautical mobile 5.446A 5.447F RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.448A	civil government civil civil
379	5 350	5 460	AERONAUTICAL RADIONAVIGATION 5.449 RADIOLOCATION 5.448D EARTH EXPLORATION-SATELLITE (active) 5.448B	government government civil
380	5 460	5 470	RADIONAVIGATION 5.449 RADIOLOCATION 5.448D	government government
381	5 470	5 570	MARITIME RADIONAVIGATION RADIOLOCATION 5.450B	government government
382	5 570	5 650	MARITIME RADIONAVIGATION RADIOLOCATION 5.450B 5.452	government government
383	5 650	5 725	RADIOLOCATION Amateur 5.282	government civil
384	5 725	5 830	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur 5.150	civil government civil
385	5 830	5 850	FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) 5.150	civil government civil civil
386	5 850	5 925	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.150	civil civil civil
387	5 925	6 425	FIXED FIXED-SATELLITE (Earth-to-space) 5.457A MOBILE POL.25	civil- government civil civil- government
388	6 425	6 700	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.149 5.440 5.458 POL.25	civil-government civil civil-government
389	6 700	7 075	FIXED FIXED-SATELLITE (Earth-to-space) (space-to-Earth) 5.441 MOBILE 5.458 5.458A 5.458B 5.458C POL.25	civil-government civil government

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
390	7 075	7 145	FIXED MOBILE 5.458 POL.25	civil civil
391	7 145	7 235	FIXED MOBILE SPACE RESEARCH (Earth-to-space) 5.460 5.458 POL.25	civil civil civil
392	7 235	7 250	FIXED MOBILE 5.458 POL.25	civil civil
393	7 250	7 300	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.461 POL.25	government government
394	7 300	7 450	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth) 5.461 POL.25	civil civil-government civil-government
395	7 450	7 550	FIXED FIXED-SATELLITE (space-to-Earth) METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461A	civil civil-government civil-government
396	7 550	7 750	FIXED FIXED-SATELLITE (space-to-Earth)	civil civil-government
397	7 750	7 850	FIXED MOBILE except aeronautical mobile METEOROLOGICAL-SATELLITE (space-to-Earth) 5.461B	civil-government civil-government civil-government
398	7 850	7 900	FIXED MOBILE except aeronautical mobile POL.25	civil-government civil-government
399	7 900	7 975	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) 5.461 POL.25	civil civil-government civil-government civil-government
400	7 975	8 025	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space) 5.461 POL.25	government government
401	8 025	8 175	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.462A POL.25	civil-government civil-government civil-government civil-government
402	8 175	8 215	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE 5.463 METEOROLOGICAL-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.462A POL.25	civil-government civil-government civil-government civil-government civil-government
403	8 215	8 400	FIXED FIXED-SATELLITE (Earth-to-space) EARTH EXPLORATION-SATELLITE (space-to-Earth) 5.462A POL.25	civil-government civil-government civil-government
404	8 400	8 500	FIXED MOBILE except aeronautical mobile SPACE RESEARCH (space-to-Earth) 5.465	civil-government civil-government civil

Pos.	f_{lower} (MHz)	f_{upper} (MHz)	Allocation	Usage
405	8 500	8 550	RADIONAVIGATION 5.469 RADIOLOCATION	government government
406	8 550	8 650	RADIONAVIGATION 5.469 RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.469A	government government civil civil
407	8 650	8 750	RADIONAVIGATION 5.469 RADIOLOCATION	government government
408	8 750	8 850	AERONAUTICAL RADIONAVIGATION 5.470 RADIOLOCATION	civil-government civil-government
409	8 850	9 000	MARITIME RADIONAVIGATION 5.472 RADIOLOCATION 5.473	civil-government civil-government
410	9 000	9 200	AERONAUTICAL RADIONAVIGATION 5.337 Radiolocation	civil-government civil-government
411	9 200	9 300	MARITIME RADIONAVIGATION 5.472 RADIOLOCATION 5.473 5.474	civil-government civil-government
412	9 300	9 500	RADIONAVIGATION Radiolocation 5.427 5.474 5.475	civil-government civil-government
413	9 500	9 800	RADIONAVIGATION RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.476A	civil-government civil-government civil civil
414	9 800	10 000	RADIOLOCATION 5.479	civil-government

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
415	10,00	10,45	RADIOLOCATION Amateur 5.479	civil-government civil
416	10,45	10,50	RADIOLOCATION Amateur Amateur-satellite	government civil civil
417	10,50	10,55	FIXED MOBILE Radiolocation	civil civil government
418	10,55	10,60	FIXED MOBILE except aeronautical mobile Radiolocation	civil civil government
419	10,60	10,68	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.149 5.482	civil civil civil civil civil
420	10,68	10,70	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
421	10,70	11,70	FIXED FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484 MOBILE except aeronautical mobile Broadcasting-satellite	civil civil civil civil
422	11,70	12,50	BROADCASTING-SATELLITE 5.487 5.487A 5.492 POL.25	civil
423	12,50	12,75	FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) Broadcasting-satellite POL.25	civil civil
424	12,75	13,25	FIXED FIXED-SATELLITE (Earth-to-space) 5.441 POL.25	civil-government civil
425	13,25	13,40	AERONAUTICAL RADIONAVIGATION 5.497 EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.498A POL.25	government civil civil
426	13,40	13,75	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH 5.501A 5.501B POL.25	government civil civil
427	13,75	14,00	FIXED-SATELLITE (Earth-to-space) 5.484A RADIOLOCATION Space research 5.502 5.503	civil government civil
428	14,00	14,25	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.506A 5.504A POL.25	civil government civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
429	14,25	14,30	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A RADIONAVIGATION 5.504 Mobile-satellite (Earth-to-space) 5.506A Space research 5.504A POL.25	civil government civil civil
430	14,30	14,40	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A Mobile-satellite (Earth-to-space) 5.506A 5.504A POL.25	civil civil
431	14,40	14,47	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A Mobile-satellite (Earth-to-space) 5.506A 5.504A	civil civil
432	14,47	14,50	FIXED-SATELLITE (Earth-to-space) 5.457A 5.484A Mobile-satellite (Earth-to-space) 5.506A Radio astronomy 5.149 5.504A	civil civil civil
433	14,50	14,62	FIXED MOBILE POL.25	civil-government government
434	14,62	14,80	FIXED MOBILE POL.25	government government
435	14,80	15,23	FIXED MOBILE 5.339 POL.25	government government
436	15,23	15,35	FIXED 5.339 POL.25	civil-government
437	15,35	15,40	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.511A	civil civil civil
438	15,40	15,43	AERONAUTICAL RADIONAVIGATION	civil
439	15,43	15,63	FIXED-SATELLITE (Earth-to-space) 5.511A AERONAUTICAL RADIONAVIGATION 5.511C	civil civil
440	15,63	15,70	AERONAUTICAL RADIONAVIGATION 5.511D	civil
441	15,70	16,60	RADIOLOCATION	government
442	16,60	17,10	RADIOLOCATION	government
443	17,10	17,20	RADIOLOCATION Mobile	government civil
444	17,20	17,30	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Mobile 5.513A	government civil civil civil
445	17,30	17,70	FIXED-SATELLITE (Earth-to-space) 5.516 (space-to-Earth) 5.516A 5.516B Radiolocation	civil government
446	17,70	18,10	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.516	civil-government civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
447	18,10	18,40	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A (Earth-to-space) 5.520 5.519	civil civil
448	18,40	18,60	FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B	civil civil
449	18,60	18,80	FIXED FIXED-SATELLITE (space-to-Earth) 5.522B EARTH EXPLORATION-SATELLITE (passive) 5.522A	civil civil civil
450	18,80	19,30	FIXED FIXED-SATELLITE (space-to-Earth) 5.523A	civil-government civil
451	19,30	19,70	FIXED FIXED-SATELLITE (space-to-Earth) (Earth-to-space) 5.523B 5.523C 5.523D 5.523E	civil civil
452	19,70	20,10	FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B Mobile-satellite (space-to-Earth) 5.525	civil civil
453	20,10	20,20	FIXED-SATELLITE (space-to-Earth) 5.484A 5.516B MOBILE-SATELLITE (space-to-Earth) 5.525 5.526 5.527 5.528	civil civil
454	20,20	21,20	FIXED-SATELLITE (space-to-Earth) MOBILE-SATELLITE (space-to-Earth)	government government
455	21,20	21,40	FIXED MOBILE EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)	civil civil civil civil
456	21,40	22,00	BROADCASTING-SATELLITE 5.530 5.347A	civil
457	22,00	22,21	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) 5.149	civil-government civil-government civil civil
458	22,21	22,50	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY SPACE RESEARCH (passive) Earth exploration-satellite (passive) 5.149 5.532	civil-government civil-government civil civil civil
459	22,50	22,55	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive)	civil-government civil-government civil civil
460	22,55	23,55	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) INTER-SATELLITE 5.149	civil-government civil-government civil civil civil
461	23,55	23,60	FIXED MOBILE INTER-SATELLITE	civil civil civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
462	23,60	24,00	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
463	24,00	24,05	AMATEUR AMATEUR-SATELLITE 5.150	civil civil
464	24,05	24,25	RADIOLOCATION Fixed Mobile Amateur Earth exploration-satellite (active) 5.150	government civil civil civil civil
465	24,25	24,45	FIXED	civil
466	24,45	24,50	FIXED	civil
467	24,50	24,65	FIXED	civil
468	24,65	24,75	FIXED	civil
469	24,75	25,25	FIXED	civil
470	25,25	25,50	FIXED MOBILE INTER-SATELLITE 5.536	civil-government civil-government civil
471	25,50	26,50	FIXED MOBILE INTER-SATELLITE 5.536 Earth exploration-satellite (space-to-Earth) 5.536A 5.536B	civil-government civil-government civil civil
472	26,50	27,00	FIXED MOBILE INTER-SATELLITE 5.536 Earth exploration-satellite (space-to-Earth) 5.536A 5.536B	government government civil civil
473	27,00	27,50	FIXED MOBILE INTER-SATELLITE 5.536	government government civil
474	27,50	28,50	FIXED POL.23 FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 5.538 5.540	civil-government civil
475	28,50	29,10	FIXED POL.23 FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.523A 5.539 Earth exploration-satellite (Earth-to-space) 5.541 5.540	civil-government civil civil
476	29,10	29,50	FIXED POL.23 FIXED-SATELLITE (Earth-to-space) 5.516B 5.523C 5.523E 5.535A 5.539 5.541A Earth exploration-satellite (Ziemia - kosmos) 5.541 5.540	civil-government civil civil
477	29,50	29,90	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 Mobile-satellite (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.540	civil civil civil
478	29,90	30,00	FIXED-SATELLITE (Earth-to-space) 5.484A 5.516B 5.539 MOBILE-SATELLITE (Earth-to-space) Earth exploration-satellite (Earth-to-space) 5.541 5.543 5.525 5.526 5.527 5.538 5.540	civil civil civil
479	30,00	31,00	FIXED-SATELLITE (Earth-to-space) MOBILE-SATELLITE (Earth-to-space)	government government

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
480	31,00	31,30	FIXED 5.149	civil
481	31,30	31,50	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
482	31,50	31,80	FIXED 5.546 RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.149	civil civil civil civil
483	31,80	32,00	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) 5.547 5.548	civil-government civil-government civil
484	32,00	32,30	FIXED 5.547A RADIONAVIGATION SPACE RESEARCH (deep space) (space-to-Earth) INTER-SATELLITE 5.547 5.548	civil-government civil-government civil civil
485	32,30	33,00	FIXED 5.547A RADIONAVIGATION INTER-SATELLITE 5.547 5.548	civil-government civil-government civil
486	33,00	33,40	FIXED 5.547A RADIONAVIGATION 5.547	civil-government civil-government
487	33,40	34,20	RADIOLOCATION	government
488	34,20	34,70	RADIOLOCATION SPACE RESEARCH (deep space) (Earth-to-space)	government civil
489	34,70	35,20	RADIOLOCATION Space research	government civil
490	35,20	35,50	RADIOLOCATION METEOROLOGICAL AIDS	government civil-government
491	35,50	36,00	RADIOLOCATION METEOROLOGICAL AIDS EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) 5.549A	government civil-government civil civil
492	36,00	37,00	FIXED MOBILE EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) Radio astronomy 5.149	government government civil civil civil
493	37,00	37,50	FIXED SPACE RESEARCH (space-to-Earth) 5.547	civil-government civil
494	37,50	38,00	FIXED FIXED-SATELLITE (space-to-Earth) SPACE RESEARCH (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547	civil-government civil civil civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
495	38,00	39,50	FIXED FIXED-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547	civil-government civil civil
496	39,50	40,00	FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE-SATELLITE (space-to-Earth) Earth exploration-satellite (space-to-Earth) 5.547	civil government government civil
497	40,00	40,50	FIXED FIXED-SATELLITE (space-to-Earth) 5.516B MOBILE-SATELLITE (space-to-Earth) SPACE RESEARCH (Earth-to-space) Earth exploration-satellite (space-to-Earth)	civil government government civil civil
498	40,50	42,50	FIXED BROADCASTING BROADCASTING-SATELLITE 5.547	civil civil civil
499	42,50	43,50	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE except aeronautical mobile RADIO ASTRONOMY Mobile 5.149 5.547 5.551H 5.551I	civil civil civil civil civil
500	43,50	45,50	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	government government government government
501	45,50	47,00	MOBILE 5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE 5.554	civil civil civil-government civil-government
502	47,00	47,20	AMATEUR AMATEUR-SATELLITE	civil civil
503	47,20	47,50	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A	civil civil civil
504	47,50	47,90	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A MOBILE	civil civil civil
505	47,90	48,20	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE 5.552A	civil civil civil
506	48,20	48,54	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A 5.555B	civil civil
507	48,54	49,44	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 MOBILE RADIO ASTRONOMY 5.555 5.149 5.340	civil civil civil civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
508	49,44	50,20	FIXED FIXED-SATELLITE (Earth-to-space) 5.552 (space-to-Earth) 5.516B 5.554A 5.555B	civil civil
509	50,20	50,40	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil
510	50,40	51,40	FIXED FIXED SATELELITARNA (Earth-to-space) Mobile-satellite (Earth-to-space)	civil civil-government civil-government
511	51,40	52,60	FIXED MOBILE RADIO ASTRONOMY 5.556 5.547	civil civil civil
512	52,60	54,25	RADIO ASTRONOMY 5.556 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
513	54,25	55,78	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive)	civil civil
514	55,78	56,90	FIXED 5.557A EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.556A 5.547 5.558	civil civil civil civil
515	56,90	57,00	FIXED MOBILE 5.558 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.547 5.558A	civil-government civil civil civil
516	57,00	58,20	FIXED MOBILE 5.558 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.556A 5.547	civil-government civil civil civil civil
517	58,20	59,00	FIXED RADIO ASTRONOMY 5.556 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.547	civil civil civil civil
518	59,00	59,30	FIXED MOBILE 5.558 RADIOLOCATION 5.559 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.556A	government government government civil civil civil
519	59,30	61,00	FIXED MOBILE 5.558 RADIOLOCATION 5.559 INTER-SATELLITE	government government government civil
520	61,00	63,00	FIXED MOBILE 5.558 RADIOLOCATION 5.559 INTER-SATELLITE 5.138	civil-government civil-government civil-government civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
521	63,00	64,00	MOBILE 5.558 RADIOLOCATION 5.559 INTER-SATELLITE	civil civil civil
522	64,00	65,00	FIXED MOBILE except aeronautical mobile INTER-SATELLITE Mobile 5.547 5.556	civil civil civil civil
523	65,00	66,00	FIXED MOBILE except aeronautical mobile EARTH EXPLORATION-SATELLITE SPACE RESEARCH INTER-SATELLITE Mobile 5.547	civil civil civil civil civil civil
524	66,00	71,00	MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE INTER-SATELLITE 5.554	civil civil civil civil civil
525	71,00	74,00	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)	government government government government
526	74,00	75,50	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.561	civil civil civil civil civil civil
527	75,50	76,00	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth) 5.559A 5.561	civil civil civil civil civil civil
528	76	77	RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite Space research (space-to-Earth) 5.149	civil-government civil civil civil civil
529	77,0	77,5	RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite Space research (space-to-Earth) 5.149	government civil civil civil civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
530	77,5	78,0	AMATEUR AMATEUR-SATELLITE Radio astronomy Space research (space-to-Earth) 5.149	civil civil civil civil
531	78	79	RADIOLOCATION Amateur Amateur-satellite Radio astronomy Space research (space-to-Earth) 5.149 5.560	government civil civil civil civil
532	79	81	RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite Space research (space-to-Earth) 5.149	government civil civil civil civil
533	81	84	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY Space research (space-to-Earth) 5.149 5.561A	civil government civil government civil civil
534	84	86	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149	civil civil civil civil
535	86	92	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	civil civil civil
536	92	94	FIXED MOBILE RADIOLOCATION RADIO ASTRONOMY 5.149	government government government civil
537	94,0	94,1	RADIOLOCATION EARTH EXPLORATION-SATELLITE (active) SPACE RESEARCH (active) Radio astronomy 5.562 5.562A	government civil civil civil
538	94,1	95,0	FIXED MOBILE RADIOLOCATION RADIO ASTRONOMY 5.149	government government government civil
539	95	100	FIXED MOBILE RADIONAVIGATION RADIONAVIGATION-SATELLITE RADIOLOCATION RADIO ASTRONOMY 5.149 5.554	government government civil-government civil-government government civil

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
540	100	102	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341	
541	102	105	FIXED MOBILE RADIO ASTRONOMY 5.149 5.341	
542	105,0	109,5	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	
543	109,5	111,8	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341	
544	111,80	114,25	FIXED MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	
545	114,25	116,00	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341	
546	116,00	119,98	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.562C 5.341	
547	119,98	122,25	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.562C 5.138 5.341	
548	122,25	123,00	FIXED MOBILE 5.558 INTER-SATELLITE Amateur 5.138	
549	123	130	FIXED-SATELLITE (space-to-Earth) MOBILE SATELITARNA (space-to-Earth) RADIONAVIGATION RADIONAVIGATION-SATELLITE Radio astronomy 5.149 5.554	
550	130	134	FIXED MOBILE 5.558 RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (active) 5.562E INTER-SATELLITE 5.149 5.562A	
551	134	136	AMATEUR AMATEUR-SATELLITE Radio astronomy	

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
552	136	141	RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite 5.149	
553	141,0	148,5	FIXED MOBILE RADIOLOCATION RADIO ASTRONOMY 5.149	
554	148,5	151,5	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive) 5.340	
555	151,5	155,5	FIXED MOBILE RADIOLOCATION RADIO ASTRONOMY 5.149	
556	155,5	158,5	FIXED MOBILE RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) 5.562F SPACE RESEARCH (passive) 5.562B 5.149 5.562G	
557	158,5	164,0	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)	
558	164	167	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	
559	167,0	174,5	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE 5.558 INTER-SATELLITE 5.149	
560	174,5	174,8	FIXED MOBILE 5.558 INTER-SATELLITE	
561	174,8	182,0	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.562H	
562	182	185	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	
563	185	190	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) INTER-SATELLITE 5.562H	
564	190,0	191,8	EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
565	191,8	200,0	FIXED MOBILE 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE INTER-SATELLITE 5.149 5.341 5.554	
566	200	202	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341 5.563A	
567	202	209	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.341 5.563A	
568	209	217	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.341	
569	217	226	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY SPACE RESEARCH (passive) 5.562B 5.149 5.341	
570	226,0	231,5	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340	
571	231,5	232,0	FIXED MOBILE Radiolocation	
572	232	235	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Radiolocation	
573	235	238	FIXED-SATELLITE (space-to-Earth) EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.563A 5.563B	
574	238	240	FIXED FIXED-SATELLITE (space-to-Earth) MOBILE RADIONAVIGATION RADIONAVIGATION-SATELLITE RADIOLOCATION	
575	240	241	FIXED MOBILE RADIOLOCATION	
576	241	248	RADIOLOCATION RADIO ASTRONOMY Amateur Amateur-satellite 5.138 5.149	

Pos.	f_{lower} (GHz)	f_{upper} (GHz)	Allocation	Usage
577	248	250	AMATEUR AMATEUR-SATELLITE Radio astronomy 5.149	
578	250	252	RADIO ASTRONOMY EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) 5.340 5.563A	
579	252	265	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) RADIONAVIGATION RADIONAVIGATION-SATELLITE RADIO ASTRONOMY 5.149 5.554	
580	265	275	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY 5.149 5.563A	
581	275	1 000	(Not allocated) 5.565	

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FOOTNOTES

TO THE NATIONAL FREQUENCY ALLOCATION TABLE

1. Footnotes of the Polish Administration

POL.1	The band 135.7—137.8 kHz is also allocated to to the amateur service on a secondary basis. Only class A1A emission is authorised; e.i.r.p. shall not exceed 1 Watt.
POL.6	In the parts of the band, aeronautical stations and aircraft stations may use 8.33 kHz channel spacing for the non-safety communication.
POL.7	The band 137—138 MHz is also allocated to the mobile-satellite service exclusively for experimental purposes, subject of agreement with the Minister of National Defence.
POL.8	The band 148.0—149.059 MHz is also allocated to the mobile-satellite service exclusively for experimental purposes, subject of agreement with the minister responsible for home affairs.
POL.10	The band 400.05—401.00 MHz is also allocated to the fixed service exclusively for the tactical radio-relays.
POL.12	The band 890—942 MHz is also allocated to the radiolocation service exclusively for the maritime radars on board vessels. The use of the radars within the interference range of territorial waters shall be coordinated.
POL.15	In the band 1 452—1 492 MHz, the fixed service may be executed exclusively by the government users, prior to the date of announcing the auction for proliferation or distribution of DAB digital broadcasting.
POL.20	The band 2 010—2 015 MHz is since 1 January 2006 allocated to the mobile service executed by the civil users (UMTS). Prior to the date of announcing the UMTS auction, this band may be used by Ministry of National Defence users.
POL.21	The band 2 500—2 690 MHz is since 1 January 2006 allocated to the mobile service executed by the civil users (UMTS). Prior to the date of announcing the UMTS auction, this band may be used by Ministry of National Defence users.
POL.22	The civil usage of specific frequencies is allowed, subject of agreement with the Minister of National Defence.
POL.23	The government usage of specific frequencies is allowed, subject of agreement with the President of Office of Telecommunications and Post Regulations.
POL.25	In the bands 153—174 MHz, 1 427—1 452 MHz, 2 025—2 110 MHz, 2 170—2 400 MHz, 2 520—2 690 MHz, 5 925—7 450 MHz, 7 850—8 400 MHz, 12.00—13.75 GHz, 14.0—14.4 GHz i 14.50—15.35 GHz, the Ministry of National Defence users may use the specific frequencies for the radiolocation service, exclusively for the equipment put into the use prior to 31 December 2002, subject of agreement with the President of Office of Telecommunications and Post Regulation.
POL.28	The band 5 650—5 850 MHz is also allocated to the fixed service executed by the civil users, exclusively till the end of validity of frequency assignments issued prior to 26 February 2003.
POL.29	In the band 960—1215 MHz the usage of the military Joint Tactical Information Distribution System / Multifunctional Information Distribution System (JTIDS/MIDS) by the Ministry of Defence units, NATO forces and Partnership for Peace forces is allowed, under provisions of the „Frequency Clearance Agreement between the Ministry of Defence and Ministry of Infrastructure relating the use of the frequency band 960—1215 MHz by the Joint Tactical Information Distribution System / Multifunctional Information Distribution System in Polish airspace”.
POL.30	In the band 50—52 MHz the amateur stations may use any class of emission except F3E; e.i.r.p. shall not exceed 100 Watts.
POL.31	The bands 52.0125—52.0875 MHz and 67.950—68.000 MHz are allocated to the land mobile service executed by civil users.

POL.32 The band 862—864 MHz may by used by the civil users of mobile service, for news gathering purposes, subject of agreement with the Minister of National Defence. This usage is limited to the users possessing licences issued prior to 1 January 2005 and on the conditions specified in these licences.

POL.33 The band 864—868 MHz may be used by the civil users of fixed service, for cordless telephony system CT2 till the end of validity of licences, but no longer as till 31 December 2008, subject of agreement with the Minister of National Defence.

POL.34 The band 869—870 may be used by the civil users of fixed service, for wireless acces system CDMA, subject of agreement with the Minister of National Defence.

POL.35 The bands 876.0—877.5 MHz and 821.0—922.5 MHz may be used by the civil users of mobile service for the railway communication system GSM-R, subject of agreement with the Minister of National Defence.

POL.36 The band 883.0—883.5 MHz may be used by the civil users of fixed service for the wireless acces systems till the end of validity of licences, but no longer as till 31 December 2018, subject of agreement with the Minister of National Defence.

2. Footnotes of the ITU Radio Regulations (Edition 2004, Geneva)

5.53 Administrations authorizing the use of frequencies below 9 kHz shall ensure that no harmful interference is caused thereby to the services to which the bands above 9 kHz are allocated.

5.54 Administrations conducting scientific research using frequencies below 9 kHz are urged to advise other administrations that may be concerned in order that such research may be afforded all practicable protection from harmful interference.

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, Bulgaria, the Russian Federation, Georgia, Kazakhstan, Mongolia, Kyrgyzstan, Slovakia, the Czech Rep., Tajikistan and Turkmenistan, the frequencies 25 kHz and 50 kHz will be used for this purpose under the same conditions.

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 exce ding that normally used for class A1A or F1B emissions in the band concerned.

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.

5.73 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.

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.

5.76 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.

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

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-97)**)*.

5.82 In the maritime mobile service, the frequency 490 kHz is, from the date of full implementation of the GMDSS (see Resolution **331 (Rev.WRC-97)**)*, to be used exclusively for the transmission by coast stations of navigational and meteorological warnings and urgent information to ships, by means of narrow-band direct-printing telegraphy. The conditions for use of the frequency 490 kHz are prescribed in Articles **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.

5.83 The frequency 500 kHz is an international distress and calling frequency for Morse radiotelegraphy. The conditions for its use are prescribed in Articles **31** and **52,** and in Appendix **13**.

5.84 The conditions for the use of the frequency 518 kHz by the maritime mobile service are prescribed in Articles **31** and **52** and in Appendix **13**.

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.

5.93 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz and, in Bulgaria, the bands 1 625-1 635 kHz and 1 800-1 810 kHz, are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. **9.21**.

5.96 In Germany, Armenia, Austria, Azerbaijan, Belarus, 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 bands 1 715-1 800 kHz and 1 850-2 000 kHz. However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. The mean power of any amateur station shall not exceed 10 W.

5.100 In Region 1, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries mentioned in Nos. **5.98** and **5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **5.98** and **5.99**.

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

5.108 The carrier frequency 2 182 kHz is an international distress and calling frequency for radiotelephony. The conditions for the use of the band 2 173.5-2 190.5 kHz are prescribed in Articles **31** and **52** and in Appendix **13**.

5.109 The frequencies 2 187.5 kHz, 4 207.5 kHz, 6 312 kHz, 8 414.5 kHz, 12 577 kHz and 16 804.5 kHz are international distress frequencies for digital selective calling. The conditions for the use of these frequencies are prescribed in Article **31**.

5.110 The frequencies 2 174.5 kHz, 4 177.5 kHz, 6 268 kHz, 8 376.5 kHz, 12 520 kHz and 16 695 kHz are international distress frequencies for narrow-band direct-printing telegraphy. The conditions for the use of these frequencies are prescribed in Article **31**.

5.111 The carrier frequencies 2 182 kHz, 3 023 kHz, 5 680 kHz, 8 364 kHz and the frequencies 121.5 MHz, 156.8 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** and in Appendix **13**.

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.

5.115 The carrier (reference) frequencies 3 023 kHz and 5 680 kHz may also be used, in accordance with Article **31** and Appendix **13** by stations of the maritime mobile service engaged in coordinated search and rescue operations.

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**).

5.129 On condition that harmful interference is not caused to the maritime mobile service, the frequencies in the bands 4 063-4 123 kHz and 4 130-4 438 kHz may be used exceptionally by stations in the fixed service communicating only within the boundary of the country in which they are located with a mean power not exceeding 50 W.

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** and in Appendix **13**.

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.

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**).

5.134 The use of the bands 5 900-5 950 kHz, 7 300-7 350 kHz, 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 13 570-13 600 kHz, 13 800-13 870 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz by the broadcasting service as from 1 April 2007 is subject to the application of the procedure of Article **12**. Administrations are encouraged to use these bands to facilitate the introduction of digitally modulated emissions in accordance with the provisions of Resolution **517 (Rev.WRC-03)**.

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

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

5.138 The following bands:

6 765 – 6 795 kHz	(centre frequency 6 780 kHz),
433.05–434.79 MHz	(centre frequency 433.92 MHz) in Region 1 except in the countries mentioned in No. **5.280**,
61–61.5 GHz	(centre frequency 61.25 GHz),
122–123 GHz	(centre frequency 122.5 GHz), and
244–246 GHz	(centre frequency 245 GHz)

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

5.138A Until 29 March 2009, the band 6 765-7 000 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis. After this date, this band is allocated to the fixed and the mobile except aeronautical mobile (R) services on a primary basis.

5.141C In Regions 1 and 3, the band 7 100-7 200 kHz is allocated to the broadcasting service until 29 March 2009 on a primary basis.

5.143 The band 7 300-7 350 kHz is allocated, until 1 April 2007, to the fixed service on a primary basis and to the land mobile service on a secondary basis, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)***. After 1 April 2007, frequencies in this band may be used by stations in the above-mentioned services, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies for these services, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

5.143B In Region 1, the band 7 350-7 450 kHz is allocated, until 29 March 2009, to the fixed service on a primary basis and to the land mobile service on a secondary basis. After 29 March 2009, on condition that harmful interference is not caused to the broadcasting service, 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, each station using a total radiated power that shall not exceed 24 dBW.

5.143E Until 29 March 2009, the band 7 450-8 100 kHz is allocated to the fixed service on a primary basis and to the land mobile service on a secondary basis.

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** and in Appendix **13**.

5.146 The bands 9 400-9 500 kHz, 11 600-11 650 kHz, 12 050-12 100 kHz, 15 600-15 800 kHz, 17 480-17 550 kHz and 18 900-19 020 kHz are allocated to the fixed service on a primary basis until 1 April 2007, subject to application of the procedure referred to in Resolution **21 (Rev.WRC-95)**. After 1 April 2007, frequencies in these bands may be used by stations in the fixed service, communicating only within the boundary of the country in which they are located, on condition that harmful interference is not caused to the broadcasting service. When using frequencies in the fixed service, administrations are urged to use the minimum power required and to take account of the seasonal use of frequencies by the broadcasting service published in accordance with the Radio Regulations.

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 10 kHz,	31,2–31,3 GHz,
25 550–25 70 kHz,	31,5–31,8 GHz in Regions 1 and 3,
37,5–38,25 MHz,	36,43 –36,5 GHz,
73–74,6 MHz in Regions 1 and 3,	42,5–43,5 GHz,
150,05–153 MHz in Region 1,	42,77–42,87 GHz,
322–328,6 MHz,	43,07–43,17 GHz,
406,1–410 MHz,	43,37–43,47 GHz,
608–614 MHz in Regions 1 and 3,	48,94–49,04 GHz,
1 330–1 400 MHz,	76–86 GHz,
1 610,6–1 613,8 MHz,	92–94 GHz,
1 660–1 670 MHz,	94,1–100 GHz,
1 718,8–1 722,2 MHz,	102–109,5 GHz,
2 655–2 690 MHz,	111,8–114,25 GHz,
3 260–3 267 MHz,	128,33–128,59 GHz
3 332–3 339 MHz,	129,23–129,49 GHz
3 345,8–3 352,5 MHz,	130–134 GHz,
4 825–4 835 MHz,	136–148,5 GHz,
4 950–4 990 MHz,	151,5–158,5 GHz,
4 990–5 000 MHz,	168,59–168,93 GHz
6 650–6 675,2 MHz,	171,11–171,45 GHz,
10,6–10,68 GHz,	172,31–172,65 GHz,
14,47–14,5 GHz,	173,52–173,85 GHz,
22,01–22,21 GHz,	195,75–196,15 GHz,
22,21–22,5 GHz,	209–226 GHz,
22,81–22,86 GHz,	241–250 GHz,
23,07–23,12 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**).

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

5.155B The band 21 870-21 924 kHz is used by the fixed service for provision of services related to aircraft flight safety.

5.157 The use of the band 23 350-24 000 kHz by the maritime mobile service is limited to inter-ship radiotelegraphy.

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, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Norway, the Netherlands, Poland, Portugal, Slovakia, the Czech Rep., the United Kingdom, Sweden and Switzerland the band 46-68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution **217 (WRC-97)**.

5.164 *Additional allocation:* in Albania, Germany, Austria, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Côte d'Ivoire, Denmark, Spain, Estonia, Finland, France, Gabon, Greece, Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Lebanon, Liechtenstein, Luxembourg, Madagascar, Mali, Malta, Morocco, Mauritania, Monaco, Nigeria, Norway, the Netherlands, Poland, Syrian Arab Republic, the United Kingdom, Serbia and Montenegro, Slovenia, Sweden, Switzerland, Swaziland, Chad, Togo, Tunisia and Turkey, the band 47-68 MHz, in Romania the band 47-58 MHz, in South Africa the band 47-50 MHz, and in the Czech Rep. the band 66-68 MHz, are also allocated to the land mobile service on a primary basis. However, stations of the land mobile service in the countries mentioned in connection with each band referred to in this footnote shall not cause harmful interference to, or claim protection from, existing or planned broadcasting stations of countries other than those mentioned in connection with the band.

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 The band 108-117.975 MHz may also be used by the aeronautical mobile (R) service on a primary basis, limited to systems that transmit navigational information in support of air navigation and surveillance functions in accordance with recognized international aviation standards. Such use shall be in accordance with Resolution **413 (WRC-03)** and shall not cause harmful interference to nor claim protection from stations operating in the aeronautical radionavigation service which operate in accordance with international aeronautical standards.

5.198 *Additional allocation:* the band 117.975-136 MHz is also allocated to the aeronautical mobilesatellite (R) service on a secondary basis, subject to agreement obtained under No. **9.21**.

5.199 The bands 121.45-121.55 MHz and 242.95-243.05 MHz are also allocated to the mobile-satellite service for the reception on board satellites of emissions from emergency position-indicating radiobeacons transmitting at 121.5 MHz and 243 MHz (see Appendix **13**).

5.200 In the band 117.975-136 MHz, the frequency 121.5 MHz is the aeronautical emergency frequency and, where required, the frequency 123.1 MHz is the aeronautical frequency auxiliary to 121.5 MHz. Mobile stations of the maritime mobile service may communicate on these frequencies under the conditions laid down in Article **31** and Appendix **13** for distress and safety purposes with stations of the aeronautical mobile service.

5.201 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, the Russian Federation, Georgia, Hungary, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Latvia, Moldova, Mongolia, Mozambique, Uzbekistan, Papua New Guinea, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 132-136 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

5.202 *Additional allocation:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Bulgaria, the United Arab Emirates, the Russian Federation, Georgia, Iran (Islamic Republic of), Jordan, Latvia, Moldova, Oman, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 136-137 MHz is also allocated to the aeronautical mobile (OR) service on a primary basis. In assigning frequencies to stations of the aeronautical mobile (OR) service, the administration shall take account of the frequencies assigned to stations in the aeronautical mobile (R) service.

5.206 *Different category of service:* in Armenia, Azerbaijan, Belarus, Bulgaria, Egypt, the Russian Federation, Finland, France, Georgia, Greece, Kazakhstan, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Syrian Arab Republic, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the allocation of the band 137-138 MHz to the aeronautical mobile (OR) service is on a primary basis (see No. **5.33**).

5.208 The use of the band 137-138 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**.

5.208A In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz, 387-390 MHz and 400.15-401 MHz, administrations shall take all practicable steps to protect the radio astronomy service in the bands 150.05-153 MHz, 322-328.6 MHz, 406.1-410 MHz and 608-614 MHz from harmful interference from unwanted emissions. The threshold levels of interference detrimental to the radio astronomy service are shown in Table 1 of Recommendation ITU-R RA.769-1.

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.

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.

5.219 The use of the 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 band 148-149.9 MHz.

5.220 The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service is subject to coordination under No. **9.11A**. The mobile-satellite service shall not constrain the development and use of the radionavigation-satellite service in the bands 149.9-150.05 MHz and 399.9-400.05 MHz.

5.221 Stations of the mobile-satellite service in the band 148-149.9 MHz shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services operating in accordance with the Table of Frequency Allocations in the following countries: Albania, Algeria, Germany, Saudi Arabia, Australia, Austria, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Bulgaria, Cameroon, China, Cyprus, Congo (Rep. of the), Korea (Rep. of), Côte d'Ivoire, Croatia, Cuba, Denmark, Egypt, the United Arab Emirates, Eritrea, Spain, Estonia, Ethiopia, the Russian Federation, Finland, France, Gabon, Ghana, Greece, Guinea, Guinea Bissau, Hungary, India, Iran (Islamic Republic of), Ireland, Iceland, Israel, Italy, the Libyan Arab Jamahiriya, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, The Former Yugoslav Republic of Macedonia, Lesotho, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Malaysia, Mali, Malta, Mauritania, Moldova, Mongolia, 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, Slovakia, Romania, the United Kingdom, Senegal, Serbia and Montenegro, Sierra Leone, Singapore, Slovenia, Sri Lanka, South Africa, Sweden, Switzerland, Swaziland, Tanzania, Chad, Thailand, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Viet Nam, Yemen, Zambia, and Zimbabwe.

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

5.223 Recognizing that the use of the band 149.9-150.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation-satellite service, administrations are urged not to authorize such use in application of No. **4.4**.

5.224A The use of the bands 149.9-150.05 MHz and 399.9-400.05 MHz by the mobile-satellite service (Earth-to-space) is limited to the land mobile-satellite service (Earth-to-space) until 1 January 2015.

5.224B The allocation of the bands 149.9-150.05 MHz and 399.9-400.05 MHz to the radionavigation-satellite service shall be effective until 1 January 2015.

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 are contained in Article **31** and Appendix **13**.

In the bands 156-156.7625 MHz, 156.8375-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, each administration shall give priority to the maritime mobile service on only such frequencies as are assigned to stations of the maritime mobile service by the administration (see Articles **31** and **52**, and Appendix **13**).

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

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

5.227 In the maritime mobile VHF service the frequency 156.525 MHz is to be used exclusively for digital selective calling for distress, safety and calling. The conditions for the use of this frequency are prescribed in Articles **31** and **52**, and Appendices **13** and **18**.

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.

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 (see Appendix **13**).

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).

5.260 Recognizing that the use of the band 399.9-400.05 MHz by the fixed and mobile services may cause harmful interference to the radionavigation satellite service, administrations are urged not to authorize such use in application of No. **4.4**.

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

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.

5.266 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** and Appendix **13**).

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

5.277 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, Cameroon, Congo (Rep. of the), Djibouti, the Russian Federation, Georgia, Hungary, Israel, Kazakhstan, Mali, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Rwanda, Tajikistan, Chad, Turkmenistan and Ukraine, the band 430-440 MHz is also allocated to the fixed service on a primary basis.

5.282 In the bands 435-438 MHz, 1 260-1 270 MHz, 2 400-2 450 MHz, 3 400-3 410 MHz (in Regions 2 and 3 only) and 5 650-5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **25.11**. The use of the bands 1 260-1 270 MHz and 5 650-5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.

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

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.

5.306 *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.

5.311 Within the frequency band 620-790 MHz, assignments may be made to television stations using frequency modulation in the broadcasting-satellite service subject to agreement between the administrations concerned and those having services, operating in accordance with the Table, which may be affected (see

Resolutions **33 (Rev.WRC-03)** and **507 (Rev.WRC-03)**). Such stations shall not produce a power flux-density in excess of the value –129 dB(W/m2) for angles of arrival less than 20° (see Recommendation **705**) within the territories of other countries without the consent of the administrations of those countries. Resolution **545 (WRC-03)** applies.

5.312 *Additional allocation*: in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Georgia, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 645-862 MHz is also allocated to the aeronautical radionavigation service on a primary basis.

5.317A Administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000) may use those parts of the band 806-960 MHz which are allocated to the mobile service on a primary basis and are used or planned to be used for mobile systems (see Resolution **224 (WRC-2000)**). This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.

5.323 *Additional allocation*: in Armenia, Azerbaijan, Belarus, Bulgaria, the Russian Federation, Hungary, Kazakhstan, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 862-960 MHz is also allocated to the aeronautical radionavigation service on a primary basis. Such use is subject to agreement obtained under No. **9.21** with administrations concerned and limited to ground-based radiobeacons in operation on 27 October 1997 until the end of their lifetime.

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.

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 (WRC-03)** 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.

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.

5.329 Use of the radionavigation-satellite service in the 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 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 (WRC-03)** shall apply.

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 other systems or services operating in accordance with the Table.

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, The Former Yugoslav Republic of Macedonia, Lesotho, Latvia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mali, Mauritania, Nigeria, Norway, Oman, the Netherlands, Poland, Portugal, Qatar, the Syrian Arab Republic, Slovakia, the United Kingdom, Serbia and Montenegro, Slovenia, Somalia, Sudan, Sri Lanka, South Africa, Sweden, Switzerland, Thailand, Togo, Turkey, Venezuela and Viet Nam, the band 1 215-1 300 MHz is also allocated to the radionavigation service on a primary basis. In Canada and the United States, the 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.

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.

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.

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.

5.339 The bands 1 370-1 400 MHz, 2 640-2 655 MHz, 4 950-4 990 MHz and 15.20-15.35 GHz are also allocated to the space research (passive) and Earth exploration-satellite (passive) services on a secondary basis.

5.339A *Additional allocation:* the band 1 390-1 392 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a secondary basis and the band 1 430-1 432 MHz is also allocated to the fixed-satellite service (space-to-Earth) on a secondary basis. These allocations are limited to use for feeder links for non-geostationary-satellite networks in the mobile-satellite service with service links below 1 GHz, and Resolution **745 (WRC-03)** applies.

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	

*** 5.340.1** The allocation to the Earth exploration-satellite service (passive) and the space research service (passive) in the band 50.2-50.4 GHz should not impose undue constraints on the use of the adjacent bands by the primary allocated services in those bands.

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.

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

5.347A In the bands:

1 452–1 492 MHz
1 525–1 559 MHz
1 613,8–1 626,5 MHz
2 655–2 690 MHz
2 670–2 690 MHz
21,4–22,0 GHz

Resolution **739 (WRC-03)** applies.

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.

5.348A In the band 1 518-1 525 MHz, the coordination threshold in terms of the power flux-density levels at the surface of the Earth in application of No. **9.11A** for space stations in the mobile-satellite (space-to-Earth) service, with respect to the land mobile service use for specialized mobile radios or used in conjunction with public switched telecommunication networks (PSTN) operating within the territory of Japan, shall be –150 dB(W/m2) in any 4 kHz band for all angles of arrival, instead of those given in Table 5-2 of Appendix **5**. In the band 1 518-1 525 MHz stations in the mobile-satellite service shall not claim protection from stations in the mobile service in the territory of Japan. No. **5.43A** does not apply.

5.348C For the use of the bands 1 518-1 525 MHz and 1 668-1 675 MHz by the mobile-satellite service, see Resolution **225 (Rev.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 authorized by an administration to communicate via space stations using these bands.

5.351A For the use of the bands 1 525-1 544 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, 1 980-2 010 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-97)** and **225 (WRC-2000)**.

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.)

5.354 The use of the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz by the mobile-satellite services is subject to coordination under No. **9.11A**.

5.356 The use of the band 1 544-1 545 MHz by the mobile-satellite service (space-to-Earth) is limited to distress and safety communications (see Article **31**).

5.357 Transmissions in the band 1 545-1 555 MHz from terrestrial aeronautical stations directly to aircraft stations, or between aircraft stations, in the aeronautical mobile (R) service are also authorized when such transmissions are used to extend or supplement the satellite-to-aircraft links.

5.357A In applying the procedures of Section II of Article **9** to the mobile-satellite service in the 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 (WRC-2000)** shall apply.)

5.359 *Additional allocation:* in Germany, Saudi Arabia, Armenia, Austria, Azerbaijan, Belarus, Benin, Bosnia and Herzegovina, Bulgaria, Cameroon, Spain, the Russian Federation, France, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, Hungary, the Libyan Arab Jamahiriya, Jordan, Kazakhstan, Kuwait, Lebanon, Lithuania, Mauritania, Moldova, Mongolia, Uganda, Uzbekistan, Pakistan, Poland, the Syrian Arab Republic, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Swaziland, Tajikistan, Tanzania, Tunisia, Turkmenistan and Ukraine, the 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 fixedservice stations in these bands.

5.362B *Additional allocation:* The band 1 559-1 610 MHz is also allocated to the fixed service on a primary basis until 1 January 2005 in Germany, Armenia, Azerbaijan, Belarus, Benin, Bosnia and Herzegovina, Bulgaria, Spain, the Russian Federation, France, Gabon, Georgia, Greece, Guinea, Guinea-Bissau, Hungary, Kazakhstan, Lithuania, Moldova, Mongolia, Nigeria, Uganda, Uzbekistan, Pakistan, Poland, Kyrgyzstan, the Dem. People's Rep. of Korea, Romania, Senegal, Swaziland, Tajikistan, Tanzania, Turkmenistan and Ukraine, and until 1 January 2010 in Saudi Arabia, Cameroon, the Libyan Arab Jamahiriya, Jordan, Kuwait, Lebanon, Mali, Mauritania, the Syrian Arab Republic and Tunisia. After these dates, the fixed service may continue to operate on a secondary basis until 1 January 2015, at which time this allocation shall no longer be valid. Administrations are urged to take all practicable steps to protect the radionavigation-satellite service and the aeronautical radionavigation service and not authorize new frequency assignments to fixed-service systems in this band.

5.364 The use of the band 1 610-1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth-to-space) is subject to coordination under No. **9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of -15 dB(W/4 kHz)in the part of the band used by systems operating in accordance with the provisions of No. **5.366** (to which No. **4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed –3 dB(W/4 kHz). Stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **5.366** and stations in the fixed service operating in accordance with the provisions of No. **5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **5.366**.

5.365 The use of the band 1 613.8-1 626.5 MHz by the mobile-satellite service (space-to-Earth) is subject to coordination under No. **9.11A**.

5.366 The band 1 610-1 626.5 MHz is reserved on a worldwide basis for the use and development of airborne electronic aids to air navigation and any directly associated ground-based or satellite-borne facilities. Such satellite use is subject to agreement obtained under No. **9.21**.

5.367 *Additional allocation*: The bands 1 610-1 626.5 MHz and 5 000-5 150 MHz are also allocated to the aeronautical mobile-satellite (R) service on a primary basis, subject to agreement obtained under No. **9.21**.

5.368 With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **4.10** do not apply in the band 1 610-1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service.

5.371 *Additional allocation:* in Region 1, the bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth) are also allocated to the radiodetermination-satellite service on a secondary basis, subject to agreement obtained under No. **9.21**.

5.372 Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6-1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (No. **29.13** applies).

5.374 Mobile earth stations in the mobile-satellite service operating in the bands 1 631.5-1 634.5 MHz and 1 656.5-1 660 MHz shall not cause harmful interference to stations in the fixed service operating in the countries listed in No. **5.359**.

5.375 The use of the band 1 645.5-1 646.5 MHz by the mobile-satellite service (Earth-to-space) and for inter-satellite links is limited to distress and safety communications (see Article **31**).

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

5.376A Mobile earth stations operating in the band 1 660-1 660.5 MHz shall not cause harmful interference to stations in the radio astronomy service.

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**.

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 -194 dB(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.

5.379D For sharing of the band 1 668-1 675 MHz between the mobile-satellite service and the fixed, mobile and space research (passive) services, Resolution **744 (WRC-03)** shall apply.

5.380 The bands 1 670-1 675 MHz and 1 800-1 805 MHz are intended for use, on a worldwide basis, by administrations wishing to implement aeronautical public correspondence. The use of the band 1 670-1 675 MHz by stations in the systems for public correspondence with aircraft is limited to transmissions from aeronautical stations and the use of the band 1 800-1 805 MHz is limited to transmissions from aircraft stations.

5.382 *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, Congo (Rep. of the), Egypt, the United Arab Emirates, Eritrea, Ethiopia, the Russian Federation, Guinea, Hungary, Iraq, Israel, Jordan, Kazakhstan, Kuwait, the Former Yugoslav Republic of Macedonia, Lebanon, Mauritania, Moldova, Mongolia, Oman, Uzbekistan, Poland, Qatar, the Syrian Arab Republic, Kyrgyzstan, Romania, Serbia and Montenegro, Somalia, Tajikistan, Tanzania, Turkmenistan, Ukraine and Yemen, the allocation of the band 1 690-1 700 MHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **5.33**), and in the Dem. People's Rep. of Korea, the allocation of the 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.

5.384A The bands, or portions of the bands, 1 710-1 885 MHz and 2 500-2 690 MHz, are identified for use by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000) in accordance with Resolution **223 (WRC-2000)**. This identification does not preclude the use of these bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations.

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.

5.388 The bands 1 885-2 025 MHz and 2 110-2 200 MHz are intended for use, on a worldwide basis, by administrations wishing to implement International Mobile Telecommunications-2000 (IMT-2000). Such use does not preclude the use of these bands by other services to which they are allocated. The bands should be made available for IMT-2000 in accordance with Resolution **212 (Rev.WRC-97)**. (See also Resolution **223 (WRC-2000)**.)

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-2000 (IMT-2000), in accordance with Resolution **221 (Rev.WRC-03)**. Their use by IMT-2000 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.

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 (WRC-95)***. The use of these bands shall not commence before 1 January 2000; however the use of the band 1 980-1 990 MHz in Region 2 shall not commence before 1 January 2005.

5.391 In making assignments to the mobile service in the 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, and shall take that Recommendation into account for the introduction of any other type of mobile system.

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 explorationsatellite services in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, shall not impose any constraints on Earth-tospace, 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.

5.399 In Region 1, in countries other than those listed in No. **5.400**, harmful interference shall not be caused to, or protection shall not be claimed from, stations of the radiolocation service by stations of the radiodetermination satellite service.

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 (until 1 January 2005 the band 2 500-2 535 MHz) may also be used for the mobile-satellite (space-to-Earth), except aeronautical mobile-satellite, service for operation limited to within national boundaries. The provisions of No. **9.11A** apply.

5.409 Administrations shall make all practicable efforts to avoid developing new tropospheric scatter systems in the band 2 500-2 690 MHz.

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**.

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

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) shall be effective on 1 January 2005 and is subject to coordination under No. **9.11A**.

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**.

5.417C Use of the band 2 605-2 630 MHz by non-geostationary-satellite systems in the broadcasting-satellite service (sound), pursuant to No. **5.417A**, for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003, is subject to the application of the provisions of No. **9.12**.

5.417D Use of the band 2 605-2 630 MHz by geostationary-satellite networks for which complete Appendix **4** coordination information, or notification information, has been received after 4 July 2003 is subject to the application of the provisions of No. **9.13** with respect to non-geostationary-satellite systems in the broadcastingsatellite service (sound), pursuant to No. **5.417A**, and No. **22.2** does not apply.

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**.

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 broadcastingsatellite service (sound), pursuant to No. **5.418** and No. **22.2** does not apply.

5.419 The allocation of the frequency band 2 670-2 690 MHz to the mobile-satellite service shall be effective from 1 January 2005. When introducing systems of the mobile-satellite service in this band, administrations shall take all necessary steps to protect the satellite systems operating in this band prior to 3 March 1992. The coordination of mobile-satellite systems in the band shall be in accordance with No. **9.11A**.

5.420 The band 2 655-2 670 MHz (until 1 January 2005 the band 2 655-2 690 MHz) may also be used for the mobile-satellite (Earth-to-space), except aeronautical mobile-satellite, service for operation limited to within national boundaries, subject to agreement obtained under No. **9.21**. The coordination under No. **9.11A** applies.

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

5.424A 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.

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

5.426 The use of the band 2 900-3 100 MHz by the aeronautical radionavigation service is limited to groundbased 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**.

5.438 Use of the band 4 200-4 400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft and for the associated transponders on the ground. However, passive sensing in the Earth exploration-satellite and space research services may be authorized in this band on a secondary basis (no protection is provided by the radio altimeters).

5.440 The standard frequency and time signal-satellite service may be authorized to use the frequency 4 202 MHz for space-to-Earth transmissions and the frequency 6 427 MHz for Earth-to-space transmissions. Such transmissions shall be confined within the limits of ± 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 fixedsatellite 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.

5.442 In the bands 4 825-4 835 MHz and 4 950-4 990 MHz, the allocation to the mobile service is restricted to the mobile, except aeronautical mobile, service.

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 band 5 030-5 150 MHz by all the space stations within any radionavigation-satellite service system (space-to-Earth) operating in the 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 band 4 990-5 000 MHz, radionavigation-satellite service systems operating in the band 5 010-5 030 MHz shall comply with the limits in the band 4 990-5 000 MHz defined in Resolution **741 (WRC-03)**.

5.444 The 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. The requirements of this system shall take precedence over other uses of this band. For the use of this band, No. **5.444A** and Resolution **114 (Rev.WRC-03)** apply.

5.444A *Additional allocation:* the band 5 091-5 150 MHz is also allocated to the fixed-satellite service (Earth-to-space) on a primary basis. This allocation is limited to feeder links of non-geostationary mobile-satellite systems in the mobile-satellite service and is subject to coordination under No. **9.11A**.

In the band 5 091-5 150 MHz, the following conditions also apply:

– prior to 1 January 2018, the use of the band 5 091-5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (Rev.WRC-03)**;

– prior to 1 January 2018, the requirements of existing and planned international standard systems for the aeronautical radionavigation service which cannot be met in the 5 000-5 091 MHz band, shall take precedence over other uses of this band;

– after 1 January 2012, no new assignments shall be made to earth stations providing feeder links of non-geostationary mobile-satellite systems;

– after 1 January 2018, the fixed-satellite service will become secondary to the aeronautical radionavigation service.

5.446 *Additional allocation:* in the countries listed in Nos. **5.369** and **5.400**, the band 5 150-5 216 MHz is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis, subject to agreement obtained under No. **9.21**. In Region 2, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a primary basis. In Regions 1 and 3, except those countries listed in Nos. **5.369** and **5.400**, the band is also allocated to the radiodetermination-satellite service (space-to-Earth) on a secondary basis. The use by the radiodetermination-satellite service is limited to feeder links in conjunction with the radiodetermination-satellite service operating in the bands 1 610-1 626.5 MHz and/or 2 483.5-2 500 MHz. The total power flux-density at the Earth's surface shall in no case exceed –159 dB(W/m^2) in any 4 kHz band for all angles of arrival.

5.446A The use of the bands 5 150-5 350 MHz and 5 470-5 725 MHz by the stations in the mobile service shall be in accordance with Resolution **229 (WRC-03)**.

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.

5.447A The allocation to the fixed-satellite service (Earth-to-space) is limited to feeder links of nongeostationary-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.

5.447C Administrations responsible for fixed-satellite service networks in the band 5 150-5 250 MHz operated under Nos. **5.447A** and **5.447B** shall coordinate on an equal basis in accordance with No. **9.11A** with administrations responsible for non-geostationary-satellite networks operated under No. **5.446** and brought into use prior to 17 November 1995. Satellite networks operated under No. **5.446** brought into use after 17 November 1995 shall not claim protection from, and shall not cause harmful interference to, stations of the fixed-satellite service operated under Nos. **5.447A** and **5.447B**.

5.447D The allocation of the band 5 250-5 255 MHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

5.447F In the 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). These services shall not impose on the mobile service more stringent protection criteria, based on system characteristics and interference criteria, than those stated in Recommendations ITU-R M.1638 and ITU-R SA.1632.

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.

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.

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**.

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.

5.450B 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.

5.452 Between 5 600 MHz and 5 650 MHz, ground-based radars used for meteorological purposes are authorized to operate on a basis of equality with stations of the maritime radionavigation service.

5.457A In the 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)**.

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**.

5.458C Administrations making submissions in the band 7 025-7 075 MHz (Earth-to-space) for geostationary-satellite systems in the fixed-satellite service after 17 November 1995 shall consult on the basis of relevant ITU-R Recommendations with the administrations that have notified and brought into use non-geostationary-satellite systems in this frequency band before 18 November 1995 upon request of the latter administrations. This consultation shall be with a view to facilitating shared operation of both geostationary-satellite systems in the fixedsatellite service and non-geostationary-satellite systems in this band.

5.460 The use of the band 7 145-7 190 MHz by the space research service (Earth-to-space) is restricted to deep space; no emissions to deep space shall be effected in the band 7 190-7 235 MHz. Geostationary satellites in the space research service operating in the 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.

5.461 *Additional allocation:* the bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-tospace) 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.

5.461B The use of the band 7 750-7 850 MHz by the meteorological-satellite service (space-to-Earth) is limited to non-geostationary satellite systems.

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:

– 174 dB(W/m^2) in a 4 kHz band	for	$0° \le \theta \le 5°$
– 174 + 0,5 (θ–5) dB(W/m^2) in a 4 kHz band	for	$5° \le \theta \le 25°$
– 164 dB(W/m^2) in a 4 kHz band	for	$25° \le \theta \le 90°$

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

5.463 Aircraft stations are not permitted to transmit in the band 8 025-8 400 MHz.

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, the Russian Federation, Georgia, Hungary, Lithuania, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, the Czech Rep., Romania, Tajikistan, Turkmenistan and Ukraine, the band 8 500-8 750 MHz is also allocated to the land mobile and radionavigation services on a primary basis.

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.

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, Bulgaria, Cuba, the Russian Federation, Georgia, Hungary, Moldova, Mongolia, Uzbekistan, Poland, Kyrgyzstan, Romania, Tajikistan, Turkmenistan and Ukraine, the bands 8 850-9 000 MHz and 9 200-9 300 MHz are also allocated to the radionavigation service on a primary basis.

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**).

5.475 The use of the band 9 300-9 500 MHz by the aeronautical radionavigation service is limited to airborne weather radars and ground-based radars. In addition, ground-based radar beacons in the aeronautical radionavigation service are permitted in the band 9 300-9 320 MHz on condition that harmful interference is not caused to the maritime radionavigation service. In the band 9 300-9 500 MHz, ground-based radars used for meteorological purposes have priority over other radiolocation devices.

5.476A In the band 9 500-9 800 MHz, stations in the Earth exploration-satellite service (active) and space research service (active) shall not cause harmful interference to, or constrain the use and development of, stations of the radionavigation and radiolocation services.

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, stations of the fixed and mobile, except aeronautical mobile, services shall be limited to a maximum equivalent isotropically radiated power of 40 dBW and the power delivered to the antenna shall not exceed –3 dBW. These limits may be exceeded subject to agreement obtained under No. **9.21**. However, in Saudi Arabia, Armenia, Azerbaijan, Bahrain, Bangladesh, Belarus, China, the United Arab Emirates, Georgia, India, Indonesia, Iran (Islamic Republic of), Iraq, Japan, Kazakhstan, Kuwait, Latvia, Lebanon, Moldova, Nigeria, Pakistan, the Philippines, Qatar, the Syrian Arab Republic, Tajikistan and Turkmenistan, the restrictions on the fixed and mobile, except aeronautical mobile, services are not applicable.

5.484 In Region 1, the use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to feeder links for the broadcasting-satellite service.

5.484A The use of the bands 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) in Region 2, 12.2-12.75 GHz (space-to-Earth) in Region 3, 12.5-12.75 GHz (space-to-Earth) in Region 1, 13.75-14.5 GHz (Earth-to-space), 17.8-18.6 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 27.5-28.6 GHz (Earth-to-space), 29.5-30 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. **9.12** for coordination with other nongeostationary-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 fixedsatellite service and of the complete coordination or notification information, as appropriate, for the geostationarysatellite 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.

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**.

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.

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.

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.

5.501A The allocation of the band 13.4-13.75 GHz to the space research service on a primary basis is limited to active spaceborne sensors. Other uses of the band by the space research service are on a secondary basis.

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.

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:

- –115 dB(W/(m^2 · 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;
- –115 dB(W/(m^2 · 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.

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) fixedsatellite 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.

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.

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.

5.511A The band 15.43-15.63 GHz is also allocated to the fixed-satellite service (space-to-Earth) on a primary basis. Use of the band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth and Earth-to-space) is limited to feeder links of non-geostationary systems in the mobile-satellite service, subject to coordination under No. **9.11A**. The use of the frequency band 15.43-15.63 GHz by the fixed-satellite service (space-to-Earth) is limited to feeder links of non-geostationary systems in the mobile-satellite service for which advance publication information has been received by the Bureau prior to 2 June 2000. In the space-to-Earth direction, the minimum earth station elevation angle above and gain towards the local horizontal plane and the minimum coordination distances to protect an earth station from harmful interference shall be in accordance with Recommendation ITU-R S.1341. In order to protect the radio astronomy service in the band 15.35-15.4 GHz, the aggregate power flux-density radiated in the 15.35-15.4 GHz band by all the space stations within any feeder-link of a non-geostationary system in the mobile-satellite service (space-to-Earth) operating in the 15.43-15.63 GHz band shall not exceed the level of -156 dB(W/m^2) in a 50 MHz bandwidth, into any radio astronomy observatory site for more than 2% of the time.

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. 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.

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/(m^2 · 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/(m^2 · 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).

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.

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.

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 feederlink earth stations anywhere within the service area of the feeder link.

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 bands by other fixed-satellite service applications or by other services to which these bands are allocated on a co-primary basis and does not establish priority in these Radio Regulations among users of the bands. Administrations should take this into account when considering regulatory provisions in relation to these bands. See Resolution **143 (WRC-03)**.

5.519 *Additional allocation:* the band 18.1-18.3 GHz is also allocated to the meteorological-satellite service (space-to-Earth) on a primary basis. Its use is limited to geostationary satellites and shall be in accordance with the provisions of Article **21**, Table **21-4**.

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.

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.

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.

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.

5.523B The use of the band 19.3-19.6 GHz (Earth-to-space) by the fixed-satellite service is limited to feeder links for non-geostationary-satellite systems in the mobile-satellite service. Such use is subject to the application of the provisions of No. **9.11A**, and No. **22.2** does not apply.

5.523C No. **22.2** shall continue to apply in the bands 19.3-19.6 GHz and 29.1-29.4 GHz, between feeder links of non-geostationary mobile-satellite service networks and those fixed-satellite service networks for which complete Appendix **4** coordination information, or notification information, is considered as having been received by the Bureau prior to 18 November 1995.

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 nongeostationary 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**.

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.

5.525 In order to facilitate interregional coordination between networks in the mobile-satellite and fixedsatellite 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.

5.528 The allocation to the mobile-satellite service is intended for use by networks which use narrow spotbeam 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**.

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

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.

5.535A 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**.

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 Recommendations ITU-R SA.1278 and ITU-R SA.1625, respectively.

5.536B In Germany, Saudi Arabia, Austria, Belgium, Brazil, Bulgaria, China, Korea (Rep. of), Denmark, Egypt, United Arab Emirates, Spain, Estonia, Finland, France, Hungary, India, Iran (Islamic Republic of), Ireland, Israel, Italy, the Libyan Arab Jamahiriya, Jordan, Kenya, Kuwait, Lebanon, Liechtenstein, Lithuania, Moldova, Norway, Oman, Uganda, Pakistan, the Philippines, Poland, Portugal, the Syrian Arab Republic, Slovakia, the Czech Rep., Romania, the United Kingdom, Singapore, Sweden, Switzerland, Tanzania, Turkey, Viet Nam and Zimbabwe, earth stations operating in the Earth exploration-satellite service in the band 25.5-27 GHz shall not claim protection from, or constrain the use and deployment of, stations of the fixed and mobile services.

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. In the band 27.500-27.501 GHz, such space-to-Earth transmissions shall not produce a power flux-density in excess of the values specified in Article **21**, Table **21-4** on the Earth's surface.

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.

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.

5.546 *Different category of service:* in Saudi Arabia, Armenia, Azerbaijan, Belarus, Egypt, the United Arab Emirates, Spain, Estonia, the Russian Federation, Finland, Georgia, Hungary, Iran (Islamic Republic of), Israel, Jordan, Latvia, Lebanon, Moldova, Mongolia, Uzbekistan, Poland, the Syrian Arab Republic, Kyrgyzstan, Romania, the United Kingdom, South Africa, Tajikistan, Turkmenistan and Turkey, the allocation of the band 31.5-31.8 GHz to the fixed and mobile, except aeronautical mobile, services is on a primary basis (see No. **5.33**).

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 Resolutions **75 (WRC-2000)** and **79 (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.

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.

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**).

5.549A In the band 35.5-36.0 GHz, the mean power flux-density at the Earth's surface, generated by any spaceborne sensor in the Earth exploration-satellite service (active) or space research service (active), for any angle greater than 0.8° from the beam centre shall not exceed -73.3 dB(W/m^2) in this band.

5.551H The equivalent power flux-density (epfd) produced in the 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 (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 for more than 2% of the time:

–230 dB(W/m^2) in 1 GHz and –246 dB(W/m^2) 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

–209 dB(W/m^2) 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 epfd values shall be evaluated using the methodology given in Recommendation ITU-R S.1586 and the reference antenna pattern and the maximum gain of an antenna in the radio astronomy service given in Recommendation ITU-R RA.1631 and shall apply over the whole sky and for elevation angles higher than the minimum operating angle θ_{min} 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.

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 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.

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 bands 47.2-47.5 GHz and 47.9-48.2 GHz is designated for use by high altitude platform stations. The use of the bands 47.2-47.5 GHz and 47.9-48.2 GHz is subject to the provisions of Resolution **122 (WRC-97)**.

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**).

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.

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-satelliteservice (space-to-Earth) is limited to geostationary satellites.

5.555 *Additional allocation:* the band 48.94-49.04 GHz is also allocated to the radio astronomy service on a primary basis.

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.

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.

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.

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).

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**).

5.558A Use of the band 56.9-57 GHz by inter-satellite systems is limited to links between satellites in geostationary-satellite orbit and to transmissions from non-geostationary satellites in high-Earth orbit to those in low-Earth orbit. For links between satellites in the geostationary-satellite orbit, the single entry power flux-density at all altitudes from 0 km to 1 000 km above the Earth's surface, for all conditions and for all methods of modulation, shall not exceed –147 dB(W/(m^2 · 100 MHz)) for all angles of arrival.

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**).

5.559A The band 75.5-76 GHz is also allocated to the amateur and amateur-satellite services on a primary basis until the year 2006.

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 broadcastingsatellite service.

5.561A The 81-81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis.

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.

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.

5.562B In the bands 105-109.5 GHz, 111.8-114.25 GHz, 155.5-158.5 GHz and 217-226 GHz, the use of this allocation is limited to space-based radio astronomy only.

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.

5.562E The allocation to the Earth exploration-satellite service (active) is limited to the band 133.5-134 GHz.

5.562F In the band 155.5-158.5 GHz, the allocation to the Earth exploration-satellite (passive) and space research (passive) services shall terminate on 1 January 2018.

5.562G The date of entry into force of the allocation to the fixed and mobile services in the band 155.5-158.5 GHz shall be 1 January 2018.

5.562H Use of the bands 174.8-182 GHz and 185-190 GHz by the inter-satellite service is limited to satellites in the geostationary-satellite orbit. The single-entry power flux-density produced by a station in the inter-satellite service, for all conditions and for all methods of modulation, at all altitudes from 0 to 1 000 km above the Earth's surface and in the vicinity of all geostationary orbital positions occupied by passive sensors, shall not exceed -144 dB(W/(m^2 · MHz)) for all angles of arrival.

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.

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.

5.565 The frequency band 275-1 000 GHz may be used by administrations for experimentation with, and development of, various active and passive services. In this band a need has been identified for the following spectral line measurements for passive services:

– radio astronomy service: 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): 275-277 GHz, 294-306 GHz, 316-334 GHz, 342-349 GHz, 363-365 GHz, 371-389 GHz, 416-434 GHz, 442-444 GHz, 496-506 GHz, 546-568 GHz, 624-629 GHz, 634-654 GHz, 659-661 GHz, 684-692 GHz, 730-732 GHz, 851-853 GHz and 951-956 GHz.

Future research in this largely unexplored spectral region may yield additional spectral lines and continuum bands of interest to the passive services. Administrations are urged to take all practicable steps to protect these passive services from harmful interference until the date when the allocation Table is established in the abovementioned frequency band.