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| **World Radiocommunication Conference (WRC-19) Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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|  |  |
| PLENARY MEETING | **Revision 1 to Addendum 2 to Document 11(Add.9)-E** |
|  | **9 October 2019** |
|  | **Original: English/Spanish** |
|  | |
| Member States of the Inter-American Telecommunication Commission (CITEL) | |
| Proposals for the work of the conference | |
|  | |
| Agenda item 1.9.2 | |

1.9 to consider, based on the results of ITU-R studies:

1.9.2 modifications of the Radio Regulations, including new spectrum allocations to the maritime mobile-satellite service (Earth-to-space and space-to-Earth), preferably within the frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz of Appendix **18**, to enable a new VHF data exchange system (VDES) satellite component, while ensuring that this component will not degrade the current terrestrial VDES components, applications specific messages (ASM) and AIS operations and not impose any additional constraints on existing services in these and adjacent frequency bands as stated in *recognizing d)* and *e)* of Resolution **360** (**Rev.WRC-15**);

Background

Resolution **360 (Rev.WRC-15)** *“Consideration of regulatory provisions and spectrum allocations to the maritime mobile-satellite service to enable the satellite component of the VHF Data Exchange System (VDES) and enhanced maritime radiocommunications”,* invites ITU-R to conduct, as a matter of urgency, and in time for WRC-19, sharing and compatibility studies between VDES satellite components and incumbent services in the same and adjacent frequency bands specified in *recognizing d)* and *e)* to determine potential regulatory actions, including spectrum allocations to the maritime mobile-satellite service (MMSS) (Earth-to-space) and (space-to-Earth) for VDES applications. To this end, the ITU-R has initiated sharing studies between the proposed VDES satellite (VDE-SAT) frequencies and the incumbent services in the same and adjacent bands so that this component does not impose any additional constraints on existing services in these and adjacent frequency bands as stated in *recognizing* *d)* and *e)* of Resolution **360 (Rev.WRC-15)**. The satellite component of the VDES could be beneficial towards enhancing maritime navigation and safety related applications on a global basis.

Traditional maritime communication methods (i.e. voice) have been used for the transfer of the information required to improve the safety of navigation particularly in adverse conditions. More information (such as weather, ice charts, status of aids to navigation, water levels and rapid changes of port status) is required in real-time to improve operational decisions on land and on ship that will lead to safer and more efficient voyages. Shore authorities have also demonstrated interest in increasing the quantity of information retrieved from ships in real-time (such as voyage information, passenger manifest and pre-arrival reports) in a more efficient way to transmit and process this information as digital information.

As a result of these additional requirements on maritime communications, WRC-15 made regulatory changes to RR Appendix **18** to facilitate the use of the terrestrial component of VHF Data Exchange system (VDES). These channels may be used by maritime authorities across the world to respond to increased data transfer and improve maritime safety and efficiency in the growing maritime environment.

VDES is an extension of the very successful Automatic Identification System (AIS) used by the maritime community, while protecting the original function of AIS identification, position reporting and tracking.

AIS, designed primarily as a collision avoidance system, and application specific messages (ASM) will continue to operate along with the new VDES channels. VDES is based on robust and efficient digital transmission rates through the aggregation of several 25 kHz channels for increased throughput capacity.

Once vessels have travelled outside the area of terrestrial coverage from shore stations, satellite networks could provide VDES capability to support and enhance safety and navigation. The satellite component of VDES is being further studied for WRC-19 to take into account existing services within and adjacent to the frequency band under consideration.

Under No. **5.225A,** the adjacent frequency band 154-156 MHz includes a primary allocation to the radiolocation service in some countries.

In accordance with Resolution **360 (Rev.WRC-15)**, the ITU-R has undertaken studies for possible new allocations to the MMSS (Earth-to-space) and (space-to-Earth), preferably within the frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz of RR Appendix **18**, to support the digital evolution of maritime radio communications.

The results of the sharing and compatibility studies are contained in Recommendation ITU-R M.2092-0 which was developed in the WRC-15 study cycle, and Report ITU-R M.2435-0, which has been developed in this study cycle.

Based on the results of these studies, six methods have been developed to satisfy WRC-19 agenda item 1.9.2. The main differences between the methods are the frequency plan and pfd-mask to be imposed on the MMSS (space-to-Earth) emissions, which are described in Report ITU-R M.2435-0.

Furthermore, the following three frequency plans have been studied in Report ITU-R M.2435-0. Note that only frequency plan alternatives 2 and 3 are used in the CPM methods.

Frequency plan alternative 1

Frequency plan alternative 1 allow for utilization of the channels 24, 84, 25, 85, 26 and 86 of RR Appendix **18** in a shared manner between VDE-TER and VDE-SAT.

– Four channels, 1024, 1084, 1025 and 1085, are shared between ship-to-shore and ship-to-satellite (VDE-SAT uplink) communications.

– Two channels, 1026 and 1086, are exclusively reserved for ship-to-satellite (VDE-SAT uplink) services.

– Four channels, 2024, 2084, 2025 and 2085, are shared among shore-to-ship, ship-to-ship and satellite-to-ship (VDE-SAT downlink) communications.

– Two channels, 2026 and 2086, are exclusively reserved for satellite-to-ship (VDE-SAT downlink) communications and are not used for VDE-TER.

Frequency plan alternative 2

Frequency plan alternative 2 allows for utilization of channels 24, 84, 25 and 85 for VDE‑TER, while channels 26 and 86 are identified for VDE-SAT uplink, and are not used for VDE-TER. VDE-SAT uplink is also possible in channels 24, 84, 25 and 85, but the VDE-SAT uplink on these channels should not impose constraints on VDE-TER. Frequencies are identified for VDE-SAT downlink within the frequency range 160.9625 MHz to 161.4875 MHz, which is not channelized in RR Appendix **18**.

– Four channels, 1024, 1084, 1025 and 1085, are identified for ship-to-shore communications, but ship-to-satellite (VDE-SAT uplink) may be possible without imposing constraints on ship-to-shore communications.

– Four channels, 2024, 2084, 2025 and 2085, are identified for shore-to-ship and ship-to-ship communications, but ship-to-satellite (VDE-SAT uplink) may be possible without imposing constraints on shore-to-ship and ship-to-ship communications.

– Two channels, 1026 and 2086, are exclusively reserved for ship-to-satellite (VDE-SAT uplink) services.

– Frequencies are identified for satellite-to-ship (VDE-SAT downlink) services within the frequency range 160.9625 MHz to 161.4875 MHz, which is not channelized in RR Appendix **18**.

Frequency plan alternative 3

Frequency plan alternative 3 allows for utilization of channels 24, 25 and 84, 85 in a shared manner between VDE‑TER and VDE-SAT, while channels 26 and 86 are identified for VDE-SAT.

– Four channels, 1024, 1084, 1025 and 1085, are shared between ship-to-shore, ship-to-ship, shore-to-ship and ship-to-satellite (VDE-SAT uplink) communications.

– Two channels, 1026 and 2086, are identified for ship-to-satellite (VDE-SAT uplink) communications and are not used for VDE-TER.

– Four channels, 2024, 2084, 2025 and 2085, are identified for satellite-to-ship (VDE-SAT downlink) communications, while the shore-to-ship communications may be possible without imposing constraints on satellite-to-ship communications.

The two channels 2026 and 2086, are identified for satellite-to-ship (VDE-SAT downlink) communications, and are not used for VDE-TER communications.

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations  
(See No. 2.1)

MOD IAP/11A9A2/1#50295

148-161.9375 MHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 156.8375-157.1875  FIXED  MOBILE except aeronautical mobile | 156.8375-157.1875  FIXED  MOBILE | |
| 5.226 | 5.226 | |
| 157.1875-157.3375  FIXED  MOBILE except aeronautical mobile  MARITIME MOBILE-SATELLITE (Earth-to-space) MOD 5.228AA | 157.1875-157.3375  FIXED  MOBILE  MARITIME MOBILE- SATELLITE (Earth-to-space) MOD 5.228AA | |
| 5.226 | 5.226 | |
| 157.3375-160.9625  FIXED  MOBILE except aeronautical mobile | 157.3375-160.9625  FIXED  MOBILE | |
| 5.226 | 5.226 | |
| **160.9625**- **161.4875**  FIXED  MOBILE except aeronautical mobile  MARITIME MOBILE-SATELLITE (space-to-Earth) MOD 5.208A MOD 5.208B ADD 5.A192 | 160.9625-161.4875  FIXED  MOBILE  MARITIME MOBILE- SATELLITE (space-to-Earth) MOD 5.208A MOD 5.208B  ADD 5.A192 | |
| 5.226 | 5.226 | |
| 161.4875-161.7875  FIXED  MOBILE except aeronautical mobile | 161.4875-161.7875  FIXED  MOBILE | |
| 5.226 | 5.226 | |
| 161.7875-161.9375  FIXED  MOBILE except aeronautical mobile  MARITIME MOBILE-SATELLITE (Earth-to-space) MOD 5.228AA | 161.7875-161.9375  FIXED  MOBILE  MARITIME MOBILE- SATELLITE (Earth-to-space) MOD 5.228AA | |
| 5.226 | 5.226 | |

MOD IAP/11A9A2/2#50296

5.228AA The use of the frequency bands 157.1875-157.3375 MHz, 161.7875-161.9375 MHz, 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix **18**.     (WRC‑19)

ADD IAP/11A9A2/3#50297

5.A192 The use of the frequency band 160.9625-161.4875 MHz by the maritime mobile-satellite (space-to-Earth) service is limited to non-GSO satellite systems operating in accordance with the most recent version of Recommendation ITU‑R M.2092. Such use is subject to the application of the provisions of No. **9.14**.     (WRC‑19)

MOD IAP/11A9A2/4#50298

5.208A In making assignments to space stations in the mobile-satellite service in the bands 137-138 MHz, 387‑390 MHz, 400.15-401 MHz and in the maritime-mobile satellite service (space-to-Earth) in the band 160.9625-161.4875 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 indicated in the relevant ITU-R Recommendation.     (WRC‑19)

MOD IAP/11A9A2/5#50299

5.208B[[1]](#footnote-1)\* In the frequency bands:

137-138 MHz,  
 160.9625-161.4875 MHz,  
 387-390 MHz,  
 400.15-401 MHz,  
 1 452-1 492 MHz,  
 1 525-1 610 MHz,  
 1 613.8-1 626.5 MHz,  
 2 655-2 690 MHz,  
 21.4-22 GHz,

Resolution **739** **(Rev.WRC‑19)** applies.     (WRC‑19)

MOD IAP/11A9A2/6

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

| Channel designator | Notes | Transmitting frequencies  (MHz) | | Inter-ship | Port operations  and ship movement | | Public corres-pondence |
| --- | --- | --- | --- | --- | --- | --- | --- |
| From ship stations | From coast stations | Single frequency | Two frequency |
| 24 | *w), x), xx)* | 157.200 | 161.800 |  | x | x | x |
| 1024 | *w), x), xx), aaa)* | 157.200 | 157.200 |  |  |  |  |
| 2024 | *w), x), xx), aaa)* | 161.800 | 161.800 | x  (digital only) |  |  |  |
| 84 | *w), x), xx)* | 157.225 | 161.825 |  | x | x | x |
| 1084 | *w), x), xx), aaa)* | 157.225 | 157.225 |  |  |  |  |
| 2084 | *w), x), xx), aaa)* | 161.825 | 161.825 | x  (digital only) |  |  |  |
| 25 | *w), x), xx)* | 157.250 | 161.850 |  | x | x | x |
| 1025 | *w), x), xx), aaa)* | 157.250 | 157.250 |  |  |  |  |
| 2025 | *w), x), xx), aaa)* | 161.850 | 161.850 | x  (digital only) |  |  |  |
| 85 | *w), x), xx)* | 157.275 | 161.875 |  | x | x | x |
| 1085 | *w), x), xx), aaa)* | 157.275 | 157.275 |  |  |  |  |
| 2085 | *w), x), xx), aaa)* | 161.875 | 161.875 | x  (digital only) |  |  |  |
| 26 | *w), x)* | 157.300 | 161.900 |  | x | x | x |
| 1026 | *w), x), aaa)* | 157.300 |  |  |  |  |  |
| 2026 | *w), x), aaa)* |  | 161.900 |  |  |  |  |
| 86 | *w), x)* | 157.325 | 161.925 |  | x | x | x |
| 1086 | *w), x), aaa)* | 157.325 |  |  |  |  |  |
| 2086 | *w), x), aaa)* |  | 161.925 |  |  |  |  |
| 27 | *z)* | 157.350 | 161.950 |  |  | x | x |
| 1027 | *zz)* | 157.350 | 157.350 |  | x |  |  |
| 2027*\** | *z)* | 161.950 | 161.950 |  |  |  |  |
| 87 | *zz)* | 157.375 | 157.375 |  | x |  |  |
| 28 | *z)* | 157.400 | 162.000 |  |  | x | x |
| 1028 | *zz)* | 157.400 | 157.400 |  | x |  |  |
| 2028*\** | *z)* | 162.000 | 162.000 |  |  |  |  |
| 88 | *zz)* | 157.425 | 157.425 |  | x |  |  |
| AIS 1 | *f), l), p)* | 161.975 | 161.975 |  |  |  |  |
| AIS 2 | *f), l), p)* | 162.025 | 162.025 |  |  |  |  |
| \*   From 1 January 2019, channel 2027 will be designated ASM 1 and channel 2028 will be designated ASM 2. | | | | | | | |

MOD IAP/11A9A2/7#50300

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article **52**)

**Notes referring to the Table**

*Specific notes*

*w)*

The frequency bands 157.1875-157.3375 MHz and 161.7875-161.9375  MHz (corresponding to channels: 24, 84, 25, 85, 26 and 86) are identified for the utilization of the VHF Data Exchange System (VDES) described in the most recent version of Recommendation ITU‑R M.2092. These frequency bands may also be used for analogue modulation described in the most recent version of Recommendation ITU‑R M.1084 by an administration that wishes to do so, subject to not causing harmful interference to, or claiming protection from other stations in the maritime mobile service using digitally modulated emissions and subject to coordination with affected administrations.     (WRC‑19)

MOD IAP/11A9A2/8

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

**Notes referring to the Table**

*Specific notes*

MOD IAP/11A9A2/9#50300

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

**Notes referring to the Table**

*Specific notes*

*x)* In Angola, Botswana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Democratic Republic of the Congo, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe, the frequency bands 157.1125-157.3375 MHz and 161.7125-161.9375 MHz (corresponding to channels: 82, 23, 83, 24, 84, 25, 85, 26 and 86) are designated for digitally modulated emissions.

In China, the frequency bands 157.1375-157.3375 MHz and 161.7375-161.9375 MHz (corresponding to channels: 23, 83, 24, 84, 25, 85, 26 and 86) are designated for digitally modulated emissions.     (WRC‑19)

MOD IAP/11A9A2/10#50300

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

**Notes referring to the Table**

*Specific notes*

*xx)* The channels 24, 84, 25 and 85 may be merged in order to form unique channels with a bandwidth of 50 kHz or 100 kHz in order to operate, in either duplex or simplex mode, the VDES terrestrial component as described in the most recent version of Recommendation ITU‑R M.2092.   (WRC‑19)

MOD IAP/11A9A2/11#50300

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

**Notes referring to the Table**

*Specific notes*

*z)*

The channels 27 and 28 are each split into two simplex channels. The channels ASM 1 and ASM 2 are used for application specific messages (ASM) as described in the most recent version of Recommendation ITU‑R M.2092.     (WRC‑19)

MOD IAP/11A9A2/12

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article **52**)

**Notes referring to the Table**

*Specific notes*

MOD IAP/11A9A2/13#50300

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article 52)

**Notes referring to the Table**

*Specific notes*

*zz)* The channels 1027, 1028, 87 and 88 are used as single-frequency analogue channels for port operation and ship movement.     (WRC‑19)

MOD IAP/11A9A2/14

APPENDIX 18 (REV.WRC‑19)

Table of transmitting frequencies in the  
VHF maritime mobile band

(See Article **52**)

**Notes referring to the Table**

*Specific notes*

*aaa)* These channels are designated for use by the VDES satellite component (VDE-SAT) in the maritime mobile-satellite service (Earth-to-space) as described in the most recent version of Recommendation ITU‑R M.2092 and using one or more of the following channelling arrangements:

– The channels 1024, 1084, 1025 and 1085 are identified for ship-to-shore, shore-to-ship and ship-to-ship communications, but ship-to-satellite (VDE-SAT uplink) communications may be possible without imposing constraints on ship-to-shore communications.

– The channels 2024, 2084, 2025 and 2085 are identified for shore-to-ship and ship-to-ship communications, but ship-to-satellite (VDE-SAT uplink) communications may be possible without imposing constraints on shore-to-ship and ship-to-ship communications.

– The channels 1026, 1086, 2026 and 2086 are identified for ship-to-satellite (VDE-SAT uplink) communications and are not used by the terrestrial component of VDES.

The use of any of the above channelling arrangements are subject to coordination with affected administrations.      (WRC‑19)

**Reasons:** Note *aaa)*: Introduces the satellite component of VDES (VDE-SAT) into RR Appendix **18** on both lower leg and upper leg of channels 24, 84, 25, 85, 26 and 86 for ship-to-satellite (VDE-SAT uplink) according to the most recent version of the Recommendation ITU-R M.2092.

MOD IAP/11A9A2/15#50301

RESOLUTION 739 (Rev.WRC-19)

Compatibility between the radio astronomy service and the active   
space services in certain adjacent and nearby frequency bands

The World Radiocommunication Conference (Sharm el-Sheikh, 2019),

...

ANNEX 1 TO RESOLUTION 739 (Rev.WRC-19)

Unwanted emission threshold levels

TABLE 1-2

epfd thresholds(1) for unwanted emissions from all space stations of a non-GSO satellite system   
at a radio astronomy station

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Space service | Space service band | Radio astronomy band | Single dish, continuum observations | | Single dish, spectral line observations | | VLBI | | Condition of application: the API is received by the Bureau following the entry into force of the Final Acts of: |
| epfd(2) | Reference bandwidth | epfd(2) | Reference bandwidth | epfd(2) | Reference bandwidth |
| **(MHz)** | **(MHz)** | **(dB(W/m2))** | **(MHz)** | **(dB(W/m2))** | **(kHz)** | **(dB(W/m2))** | **(kHz)** |
| MSS (space-to-Earth) | 137-138 | 150.05-153 | −238 | 2.95 | NA | NA | NA | NA | WRC-07 |
| MMSS (space-to-Earth) | 160.9625-161.4875 | 150.05-153 | −238 | 2.95 | NA | NA | NA | NA | WRC-19 |
| MMSS (space-to-Earth) | 160.9625-161.4875 | 322-328.6 | −240 | 6.6 | −255 | 10 | −228 | 10 | WRC-19 |
| MSS (space-to-Earth) | 387-390 | 322-328.6 | −240 | 6.6 | −255 | 10 | −228 | 10 | WRC-07 |
| MSS (space-to-Earth) | 400.15-401 | 406.1-410 | −242 | 3.9 | NA | NA | NA | NA | WRC-07 |
| MSS (space-to-Earth) | 1 525-1 559 | 1 400-1 427 | −243 | 27 | −259 | 20 | −229 | 20 | WRC-07 |
| RNSS (space-to-Earth)(3) | 1 559-1 610 | 1 610.6-1 613.8 | NA | NA | −258 | 20 | −230 | 20 | WRC‑07 |
| MSS (space-to-Earth) | 1 525-1 559 | 1 610.6-1 613.8 | NA | NA | −258 | 20 | −230 | 20 | WRC-07 |
| MSS (space-to-Earth) | 1 613.8-1 626.5 | 1 610.6-1 613.8 | NA | NA | −258 | 20 | −230 | 20 | WRC-03 |

SUP IAP/11A9A2/16#50294

Resolution 360 (Rev.WRC‑15)

Consideration of regulatory provisions and spectrum allocations to the maritime mobile-satellite service to enable the satellite component of the VHF Data Exchange System and enhanced maritime radiocommunication

**Reasons:** Resolution **360 (Rev.WRC-15)** is proposed to be suppressed as it will not be needed when the regulatory provisions and spectrum allocations to the maritime mobile-satellite service required to enable the VDES satellite component (VDE-SAT) have been approved by WRC-19.

MOD IAP/11A9A2/17#50303

APPENDIX 5 (REV.WRC‑19)

Identification of administrations with which coordination is to be effected or  
agreement sought under the provisions of Article 9

MOD IAP/11A9A2/18#50304

TABLE 5-1 (*continued*)     (Rev.WRC‑19)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reference of Article 9 | Case | Frequency bands  (and Region) of the service  for which coordination  is sought | Threshold/condition | Calculation  method | Remarks |
| No. **9.14** Non-GSO/ terrestrial, GSO/ terrestrial | A space station in a satellite network in the frequency bands for which a footnote refers to No. **9.11A** or to No. **9.14**, in respect of stations of terrestrial services where threshold(s) is (are) exceeded | 1) Frequency bands for which a footnote refers to No. **9.11A**; or  2) 11.7-12.2 GHz (Region 2 GSO FSS)  3) 5 030-5 091 MHz  4) 160.9625‑161.4875 MHz (non-GSO maritime mobile-satellite service) | 1) See § 1 of Annex 1 to this Appendix; In the bands specified in No. **5.414A**, the detailed conditions for the application of No. **9.14** are provided in No. **5.414A** for MSS networks or  2) In the band 11.7-12.2 GHz (Region 2 GSO FSS): −124 dB(W/(m2 · MHz)) for 0° ≤ θ ≤ 5° −124 + 0.5 (θ – 5) dB(W/(m2 · MHz)) for 5° < θ ≤ 25° −114 dB(W/(m2 · MHz)) for θ > 25° where θ is the angle of arrival of the incident wave above the horizontal plane (degrees)  3) Bandwidth overlap  4) In the band 160.9625‑161.4875 MHz (non-GSO maritime mobile-satellite service):  −142.72 − 8.15 + 12\*(θ°/16.47)2 dB(W/(m2· 4 kHz)) for 0° ≤ θ < 8.5° −149 + 0.16·θ° dB(W/(m2 · 4 kHz)) for 8.5° ≤ θ < 45° −142 + 0.53·(θ° − 45°) dB(W/(m2 · 4 kHz)) for 45° ≤ θ < 58° −142.72 + 6.85 − 10log10((θ°/16.47)−1.5 + 0.7) dB(W/(m2 · 4 kHz)) for 58° ≤ θ ≤ 90° where θ is the angle of arrival of the incident wave above the horizontal plane (degrees). | 1) See § 1 of Annex 1 to this Appendix |  |

**Reasons:** The above modification defines a coordination threshold in Table 5-1 for references of RR No. **9.14** for the VDE-SAT downlink to ensure compatibility with terrestrial services. The coordination threshold mask is defined in Annex 2 of Report ITU-R M.2435-0.

\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \* This provision was previously numbered as No. **5.347A**. It was renumbered to preserve the sequential order. [↑](#footnote-ref-1)