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| U.S. Radiocommunications SectorFact Sheet |
| **Working Party:** ITU-R WP 5B | **Document No:** USWP5B35-22 |
| Ref: Resolution 256 (WRC-23) | **Date:** 9/22/25 |
| **Document Title:** Additional technical information for sharing studies under WRC-27 agenda item 1.7 |
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| **Purpose/Objective:** This contribution presents additional information on radio altimeters operating in the 4.2-4.4 GHz band. |
| **Abstract:** This contribution presents additional information for WP 5B’s consideration when developing their response liaison station to WP 5D concerning WRC-27 agenda item 1.7. |

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| **Radiocommunication Study Groups** | A blue logo with a black background  Description automatically generated |
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| Subject: WRC-27 agenda item 1.7 | Document 5B/USA-E |
| Date 2025 |
| English only |
| United States of America |
| Additional technical information for sharing studies under WRC-27 agenda item 1.7 |

1. **Introduction**

At the last meeting (April to May 2025), Working Party (WP) 5B, as a contributing group for WRC-27 agenda item 1.7, informed WP 5D that further information on radio altimeter performance in the frequency band 4 200-4 400 MHz and updates to considerations of WAIC may be provided.

1. **Proposal**

The United States provides WP 5B a draft reply liaison for consideration to liaise to WP 5D with further information on radio altimeter performance.

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**ATTACHMENT**

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| REPLY LIAISON STATEMENT TO WORKING PARTY 5D (COPY FOR INFORMATION TO WORKING PARTIES 1B, 3K, 3M, 4A, 4C, 5A, 5C, 7B, 7C, 7D AND ICAO) |
| **Additional technical information for sharing studies under WRC-27 agenda item 1.7** |

Working Party (WP) 5B would like to thank WP 5D for its liaison statement (Document [5B/147](https://www.itu.int/md/R23-WP5B-C-0147/en)) requesting additional information on radio altimeter performance in the frequency band 4200 - 4400 MHz. WP 5B provides to WP 5D the following technical information regarding radio altimeters to consider when conducting compatibility studies.

The evaluation of potential interferers should consider all altitudes radio altimeters operate.

**Application of Radio Altimeter Protection Criteria in Rec. ITU-R M.2059**

When conducting studies using the protection criteria found in Rec. ITU-R M.2059, the protection criteria contained in Annex 3 can be assumed to apply from the “*upper limit of the “Range of reported altitude”*” () to the “*Operational Altitude*” () stipulated in Tables 1 and 2 of the Rec. For altitudes less than the , an altitude adjustment factor () may be considered.

An can be used to approximate the assumed radio altimeters behaviour of improved resilience to interfering signals at lower altitudes. This can be empirically derived based on publicly available test data, including radio altimeter breakpoints and interference tolerance thresholds from Annex 3.6 of the Report on the 34th meeting of Working Party 5B ([5B/315](https://www.itu.int/dms_ties/itu-r/md/23/wp5b/c/R23-WP5B-C-0315%21H3-N03.06%21MSW-E.docx)) *[Editor’s Note: May need to update with new WP5B Report Annex]*. The can be assumed to follow the below equation.

 for, 0

 for,

 , for,

where:

 : A threshold altitude below which further interference resilience is not assumed

 : Altitude of the altimeter

 : Approximated interference resilience improvement factor

**Direct Use of Publicly Available Test Data**

Publicly available test data, including radio altimeter breakpoints and interference tolerance thresholds from Annex 3.6 of the Report on the 34th meeting of Working Party 5B ([5B/315](https://www.itu.int/dms_ties/itu-r/md/23/wp5b/c/R23-WP5B-C-0315%21H3-N03.06%21MSW-E.docx)) *[Editor’s Note: May need to update with new WP5B Report Annex]* may be directly used in studies.

Finally, WP 5B requests to be kept informed on the progress of the studies under WRC-27 agenda item 1.7.

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| **Status:** For action |  |
| **Contact:**  | **E-mail:**  |

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