| **US Radiocommunication Sector** **FACT SHEET** |
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| **Study Group:** USWP 7D | **Document No:** USWP7D\_25-02\_AI1.16-RLS4A |
| **Reference:** [7D/140](https://www.itu.int/md/R23-WP7D-C-0140/en) | **Date: Feb 2025** |
| **Document Title:** Draft Liaison Statement to WP4A  |
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| **Purpose/Objective**: This document proposes a draft liaison statement to WP4A in response to document [7D/140](https://www.itu.int/md/R23-WP7D-C-0140/en) |
| **Abstract**: This document responds to WP 4A's liaison statement on FSS non-GSO system characteristics adjacent to RAS primary allocations. It requests clarification on antenna pattern transition angles, reaffirms that Resolution 681 (WRC-23) studies should not constrain FSS operations, and clarifies the status of Chile's Radio Quiet Zone.  |
| **Fact Sheet Preparer:** Hastyar Barvar |

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| **Radiocommunication Study Groups** |  |
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| **Date** |
| **English only** |

**United States of America**

REPLY LIAISON STATEMENT TO WORKING PARTY 4A

**Relevant technical information to support studies under WRC-27 agenda item 1.16 documenting FSS characteristics in some frequency bands**

# Introduction

In response WP7D’s liaison statement, WP4A submitted a reply liaison statement to WP7D, [Doc.7D/140](https://www.itu.int/md/R23-WP7D-C-0140/en), in which a number of points are included. Addressing these points could facilitate the correspondence between two working parties in connection with WRC-27 AI 1.16. The United States proposes the attached draft reply liaison statement to address these points.

**Attachment:** 1

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| Attachment |
| DRAFT REPLY LIAISON STATEMENT TO WORKING PARTY 4A |
| Relevant technical information to support studies under WRC-27 agenda item 1.16 documenting FSS characteristics in some frequency bands |

WP 7D expresses gratitude to WP 4A for its liaison statement in Document 7D/140, which provides characteristics of representative FSS non-GSO systems in the space-to-Earth direction in frequency bands adjacent to those allocated to RAS service on a primary basis, as listed in Table 1 of Resolution **681 (WRC-23)**. Regarding these characteristics, Alt text: WP 7D acknowledges WP 4A’s specifications on antenna patterns and requests further clarification on the following:

1. The precise transition angles for antenna patterns outlined for Systems A and B, as defined in Recommendation ITU-R S.1528.
2. The applicability of angular separation techniques for multiple non-GSO systems operating simultaneously, particularly at 4° for Ku-band, 2° for Q/V-band, and 1.5° for E-band

Concerning resolves 4 to 6 of Resolution **681 (WRC-23)**, WP 7D acknowledges the ambiguous nature of this aspect of the Resolution and reiterates that the outcome of studies will not result in any technical or regulatory constraints on FSS allocations or the current and future operation of non-GSO FSS systems, nor adversely affect such operations.

Regarding the RQZ of Chile, ALMA, and the information on protection and coordination zones, WP 7D provides the following clarifications:

1. This information was provided as additional detail specific to this particular RQZ location and is not enforced in the Radio Regulations.

2. The protection and coordination zones referenced are specific to Chile’s domestic licensing framework and any relevant bilateral agreements and do not extend beyond these.

Considering these points, these zones will not be considered in WP 7D’s studies under Agenda Item 1.16, as they are not enforced through the Radio Regulations, rather, the station characteristics as recognized in the MIFR may be used.

Concerning, methodologies and mitigation measures, WP 7D reaffirms its commitment to using ITU-R Recommendations to ensure consistency and technical accuracy:

1. ITU-R S.1586-1 will serve as the baseline for assessing interference levels at RAS sites.
2. ITU-R SM.1541-6 will guide out-of-band emission assessments.
3. WP 7D plans to incorporate modeling for simultaneous operations of multiple non-GSO systems, addressing angular separation requirements as highlighted by WP 4A.

With respect to resolves 4 to 6 of Resolution **681 (WRC-23)**, the list of frequency bands where RAS has a primary allocation, for which non-GSO FSS characteristics will be used in studies , is as follows:

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| Radio Quiet Zone | Radio astronomy frequency band | Active space service operating in adjacent or nearby frequency band | Active space service (space-to-Earth) |
| Square Kilometre Array | 10.6-10.7 GHz | 10.7-10.95 GHz | FSS |
| ALMA | 42.5-43.5 GHz | 42-42.5 GHz | FSS |
| 76-77.5 GHz | 74-76 GHz | FSS, MSS |
| 94.1-95 GHz | 95-100 GHz | RNSS, MSS |
| 100-102 GHz | 95-100 GHz | RNSS, MSS |
| 114.25-116 GHz | 116-119.98 GHz | ISS |
| 130-134 GHz | 123-130 GHz | FSS, MSS, RNSS |

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| **Status:** For action |
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