| **U.S. Radiocommunication Sector****FACT SHEET** |
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| **Study Group:** WP7B | **Document No:** US7B\_27\_023\_NC |
| **Reference:** Resolution **680 (WRC-23),** WRC-27 Agenda Item **1.15** | **Date:** 11 February 2025 |
| **Document Title:**WORKING DOCUMENT TOWARDS PRELIMINARY DRAFT CPM TEXT FOR WRC-27 AGENDA ITEM 1.15  |
| **Authors** | **Telephone** | **E-Mail** |
| Dennis Lee, NASA/JPLCathy Sham, NASA/JSCScott Kotler, Lockheed Martin Steve Baruch, NWSP for Lockheed Martin Corporation | 818-354-6908281-222-1117703-789-3923240-476-2600 | dennis.k.lee@jpl.nasa.govcatherine.c.sham@nasa.govscott.kotler@LMCO.comsbaruch@newwavespectrum.com |
| **Purpose/Objective**:The purpose of this contribution is to provide WP 7B with an initial framework document for the WRC-27 Agenda item 1.15 CPM text.  |
| **Abstract**: Under Agenda item **1.15** **(WRC-27)**, possible new or modified space research service (space-to-space) allocations, in the frequency ranges identified in Resolution **680 (WRC-23)** *resolves to invite* 1, are under study to ensure sharing and compatibility between SRS links on the lunar surface/between lunar orbit and lunar surface and incumbent services in Res **680 (WRC-23)** *recognizings* g) to n) and RAS in adjacent and nearby bands. This contribution is intended to provide a draft framework document for the Agenda item **1.15 (WRC-27)** CPM text based on the guidance from the CPM-27 chair found in Document 7B/67. |
| **Fact Sheet Preparer:** Dennis Lee, NASA/JPL |

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| **Radiocommunication Study Groups** |  |
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| Received: X March 2025 | Document 7B/XXX-E |
| X March 2025 |
| English onlySPECTRUM ASPECTS AND WRC PREPARATIONS |
| United States of America |
| Working Document towards preliminary Draft CPM Text for WRC-27 Agenda Item 1.15 |
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Introduction

WRC-23 approved WRC-27 agenda item 1.15, “to consider studies on frequency-related matters, including possible new or modified space research service (space-to-space) allocations, for future development of communications on the lunar surface and between lunar orbit and the lunar surface” in accordance with Resolution **680 (WRC-23)**.

At previous meetings of Working Party 7B (WP 7B), a document on sharing and compatibility studies was created and is under review. During this time, the chair of CPM-27 presented Document [7B/67](https://www.itu.int/md/R23-WP7B-C-0067/en), which outlines the preparation of texts for the draft CPM Report to WRC-27. It is now timely to develop a framework for the draft CPM text related to agenda item 1.15 for WRC-27, as well as to provide information on the background section. Note that this contribution is only providing a framework structure for the agenda item 1.15 draft CPM text to be developed in the future.

Proposal

The United States of America proposes in the attachment a working document towards preliminary draft CPM text for WRC-27 agenda item 1.15.

**Attachment**: 1

Attachment

WORKING DOCUMENT TOWARDS PRELIMINARY DRAFT CPM TEXT FOR WRC-27 AGENDA ITEM 1.15

CHAPTER 4

Science issues

(Agenda items 1.15, 1.16, 1.17, 1.18, 1.19)

Agenda item 1.15

**(WP 7B / WP 3J, WP 4A, WP 4C, WP 5A, WP 5B, WP 5C, WP 5D, WP 7A, WP 7C, WP 7D)**

*1.15 to consider studies on frequency-related matters, including possible new or modified space research service (space-to-space) allocations, for future development of communications on the lunar surface and between lunar orbit and the lunar surface, in accordance with Resolution 680 (WRC 23);*

Resolution **680 (WRC-23)** – Studies on frequency-related matters, including possible new or modified space research service (space-to-space) allocations, for future development of communications on the lunar surface and between lunar orbit and the lunar surface

# 4/1.15/1 Executive summary

*[Text of the executive summary, not more than half a page of text to describe briefly the purpose of the agenda item, summarize the results of the studies carried out and, most importantly, provide a brief description of the method(s) identified that may satisfy the agenda item]*

# 4/1.15/2 Background

*[Text of the background, not more than half a page of text to provide general information in a concise manner, in order to describe the rationale of the agenda items (or issue(s))]*

WRC-27 agenda item 1.15 focuses on the identification of new or modified frequency bands for the Space Research Service (SRS) (space-to-space) for future development of communications on the lunar surface and between lunar orbit and lunar surface, as outlined in Resolution **680 (WRC-23)**. It calls for studies addressing technical, operational, and regulatory considerations in the frequency bands 390-406.1 MHz, 420-430 MHz, and 440-450 MHz, limited to outside the shielded zone of the Moon (SZM), as well as in the bands 2 400-2 690 MHz, 3 500-3 800 MHz, 5 150-5 570 MHz, 5 570-5 725 MHz, 5 775-5 925 MHz, 7 190-7 235 MHz, 8 450-8 500 MHz, and 25.25-28.35 GHz. These studies aim to support the growing global interest in lunar exploration for conducting scientific discovery and space exploration activities in lunar orbit and on the lunar surface.

The goal is to address the lunar spectrum needs while ensuring that the SRS does not interfere with radiocommunication services, as specified in *recognizing* *g) to n)* of Resolution **680 (WRC-23**), and with the RAS on the Earth and in the SZM in the same, adjacent, or nearby bands. This aims to assist countries in developing communication systems on the Moon and in its vicinity, promote technological advancements, and ensure compatibility with existing services.

# 4/1.15/3 Summary and Analysis of the results of ITU-R studies

*[This section should contain a summary of the technical and operational studies performed within ITU-R, including a list of relevant ITU-R Recommendations. Depending on the agenda item, this section could be divided in two parts, one part dealing with the summary and the other part dealing with the analysis.*

*The results of the ITU-R studies should also be analysed with respect to the possible methods of satisfying the agenda item, and presented in a concise manner.]*

# 4/1.15/4 Methods to satisfy the agenda item

*[This section should contain the brief description of the Method or Methods to satisfy the agenda item as per section A2.4 of Annex 2 to* [*Resolution ITU-R 2-9*](https://www.itu.int/pub/R-RES-R.2-9-2023)*]*

## 4/1.15/4.1 Issue A: Frequency band 390-406.1 MHz

*[Brief text describing Issue A]*

### 4/1.15/4.1.1 Method A1: [title of Method A1, if any]

*[Text describing the first method to satisfy Issue A]*

### 4/1.15/4.1.2 Method A2: [title of Method A2, if any]

*[Text describing the second method to satisfy Issue A]*

*[Additional sections with text describing other methods to satisfy Issue A, if any]*

## 4/1.15/4.2 Issue B: Frequency band 420-430 MHz

*[Brief text describing Issue B]*

### 4/1.15/4.2.1 Method B1: [title of Method B1, if any]

*[Text describing the first method to satisfy Issue B]*

### 4/1.15/4.2.2 Method B2: [title of Method B2, if any]

*[Text describing the second method to satisfy Issue B]*

*[Additional sections with text describing other methods to satisfy Issue B, if any]*

## 4/1.15/4.3 Issue C: Frequency band 440-450 MHz

*[Brief text describing Issue C]*

### 4/1.15/4.3.1 Method C1: [title of Method C1, if any]

*[Text describing the first method to satisfy Issue C]*

### 4/1.15/4.3.2 Method C2: [title of Method C2, if any]

*[Text describing the second method to satisfy Issue C]*

*[Additional sections with text describing other methods to satisfy Issue C, if any]*

## 4/1.15/4.4 Issue D: Frequency band 2 400-2 690 MHz

*[Brief text describing Issue D]*

### 4/1.15/4.4.1 Method D1: [title of Method D1, if any]

*[Text describing the first method to satisfy Issue D]*

### 4/1.15/4.4.2 Method D2: [title of Method D2, if any]

*[Text describing the second method to satisfy Issue D]*

*[Additional sections with text describing other methods to satisfy Issue D, if any]*

## 4/1.15/4.5 Issue E: Frequency band 3 500-3 800 MHz

*[Brief text describing Issue E]*

### 4/1.15/4.5.1 Method E1: [title of Method E1, if any]

*[Text describing the first method to satisfy Issue E]*

### 4/1.15/4.5.2 Method E2: [title of Method E2, if any]

*[Text describing the second method to satisfy Issue E]*

*[Additional sections with text describing other methods to satisfy Issue E, if any]*

## 4/1.15/4.6 Issue F: Frequency band 5 150-5 570 MHz

*[Brief text describing Issue F]*

### 4/1.15/4.6.1 Method F1: [title of Method F1, if any]

*[Text describing the first method to satisfy Issue F]*

### 4/1.15/4.6.2 Method F2: [title of Method F2, if any]

*[Text describing the second method to satisfy Issue F]*

*[Additional sections with text describing other methods to satisfy Issue F, if any]*

## 4/1.15/4.7 Issue G: Frequency band 5 570-5 725 MHz

*[Brief text describing Issue G]*

### 4/1.15/4.7.1 Method G1: [title of Method G1, if any]

*[Text describing the first method to satisfy Issue G]*

### 4/1.15/4.7.2 Method G2: [title of Method G2, if any]

*[Text describing the second method to satisfy Issue G]*

*[Additional sections with text describing other methods to satisfy Issue G, if any]*

## 4/1.15/4.8 Issue H: Frequency band 5 775-5 925 MHz

*[Brief text describing Issue H]*

### 4/1.15/4.8.1 Method H1: [title of Method H1, if any]

*[Text describing the first method to satisfy Issue H]*

### 4/1.15/4.8.2 Method H2: [title of Method H2, if any]

*[Text describing the second method to satisfy Issue H]*

*[Additional sections with text describing other methods to satisfy Issue H, if any]*

## 4/1.15/4.9 Issue I: Frequency band 7 190-7 235 MHz

*[Brief text describing Issue I]*

### 4/1.15/4.9.1 Method I1: [title of Method I1, if any]

*[Text describing the first method to satisfy Issue I]*

### 4/1.15/4.9.2 Method I2: [title of Method I2, if any]

*[Text describing the second method to satisfy Issue I]*

*[Additional sections with text describing other methods to satisfy Issue I, if any]*

## 4/1.15/4.10 Issue J: Frequency band 8 450-8 500 MHz

*[Brief text describing Issue J]*

### 4/1.15/4.10.1 Method J1: [title of Method J1, if any]

*[Text describing the first method to satisfy Issue J]*

### 4/1.15/4.10.2 Method J2: [title of Method J2, if any]

*[Text describing the second method to satisfy Issue J]*

*[Additional sections with text describing other methods to satisfy Issue J, if any]*

## 4/1.15/4.11 Issue K: Frequency band 25.25-28.35 GHz

*[Brief text describing Issue K]*

### 4/1.15/4.11.1 Method K1: [title of Method K1, if any]

*[Text describing the first method to satisfy Issue K]*

### 4/1.15/4.11.2 Method K2: [title of Method K2, if any]

*[Text describing the second method to satisfy Issue K]*

*[Additional sections with text describing other methods to satisfy Issue K, if any]*

4/1.15/5 Regulatory and procedural considerations

4/1.15/5.1 For Issue A: Frequency band 390-406.1 MHz

4/1.15/5.1.1 For Method A1: [title of Method A1]

*[Example(s) of regulatory text for the first method to satisfy Issue A]*

4/1.15/5.1.2 For Method A2: [title of Method A2]

*[Example(s) of regulatory text for the second method to satisfy Issue A]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue A, if any]*

4/1.15/5.2 For Issue B: Frequency band 420-430 MHz

4/1.15/5.2.1 For Method B1: [title of Method B1]

*[Example(s) of regulatory text for the first method to satisfy Issue B]*

4/1.15/5.2.2 For Method B2: [title of Method B2]

*[Example(s) of regulatory text for the second method to satisfy Issue B]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue B, if any]*

4/1.15/5.3 For Issue C: Frequency band 440-450 MHz

4/1.15/5.3.1 For Method C1: [title of Method C1]

*[Example(s) of regulatory text for the first method to satisfy Issue C]*

4/1.15/5.3.2 For Method C2: [title of Method C2]

*[Example(s) of regulatory text for the second method to satisfy Issue C]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue C, if any]*

4/1.15/5.4 For Issue D: Frequency band 2 400-2 690 MHz

4/1.15/5.4.1 For Method D1: [title of Method D1]

*[Example(s) of regulatory text for the first method to satisfy Issue D]*

4/1.15/5.4.2 For Method D2: [title of Method D2]

*[Example(s) of regulatory text for the second method to satisfy Issue D]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue D, if any]*

4/1.15/5.5 For Issue E: Frequency band 3 500-3 800 MHz

4/1.15/5.5.1 For Method E1: [title of Method E1]

*[Example(s) of regulatory text for the first method to satisfy Issue E]*

4/1.15/5.5.2 For Method E2: [title of Method E2]

*[Example(s) of regulatory text for the second method to satisfy Issue E]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue E, if any]*

4/1.15/5.6 For Issue F: Frequency band 5 150-5 570 MHz

4/1.15/5.6.1 For Method F1: [title of Method F1]

*[Example(s) of regulatory text for the first method to satisfy Issue F]*

4/1.15/5.6.2 For Method F2: [title of Method F2]

*[Example(s) of regulatory text for the second method to satisfy Issue F]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue F, if any]*

4/1.15/5.7 For Issue G: Frequency band 5 550-5 725 MHz

4/1.15/5.7.1 For Method G1: [title of Method G1]

*[Example(s) of regulatory text for the first method to satisfy Issue G]*

4/1.15/5.7.2 For Method G2: [title of Method G2]

*[Example(s) of regulatory text for the second method to satisfy Issue G]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue G, if any]*

4/1.15/5.8 For Issue H: Frequency band 5 775-5 925 MHz

4/1.15/5.8.1 For Method H1: [title of Method H1]

*[Example(s) of regulatory text for the first method to satisfy Issue H]*

4/1.15/5.8.2 For Method H2: [title of Method H2]

*[Example(s) of regulatory text for the second method to satisfy Issue H]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue H, if any]*

4/1.15/5.9 For Issue I: Frequency band 7 190-7 235 MHz

4/1.15/5.9.1 For Method I1: [title of Method I1]

*[Example(s) of regulatory text for the first method to satisfy Issue I]*

4/1.15/5.9.2 For Method I2: [title of Method I2]

*[Example(s) of regulatory text for the second method to satisfy Issue I]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue I, if any]*

4/1.15/5.10 For Issue J: Frequency band 8 450-8 500 MHz

4/1.15/5.10.1 For Method J1: [title of Method J1]

*[Example(s) of regulatory text for the first method to satisfy Issue J]*

4/1.15/5.10.2 For Method J2: [title of Method J2]

*[Example(s) of regulatory text for the second method to satisfy Issue J]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue J, if any]*

4/1.15/5.11 For Issue K: Frequency band 25.25-28.35 GHz

4/1.15/5.11.1 For Method K1: [title of Method K1]

*[Example(s) of regulatory text for the first method to satisfy Issue K]*

4/1.15/5.11.2 For Method K2: [title of Method K2]

*[Example(s) of regulatory text for the second method to satisfy Issue K]*

*[Additional sections with example(s) of regulatory text for the other methods to satisfy Issue K, if any]*

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