

## 2655-2690 MHz

### 1. Band Introduction

The primary Federal uses of this band are by the Air Force for research, development, and testing, the U.S. Department of Energy (DOE), the National Aeronautics and Space Administration (NASA), and the National Science Foundation (NSF).

### 2. Federal Agency Use

#### 2a. Allocation Table

The frequency allocation table shown below is extracted from the Manual of Regulations & Procedures for Federal Radio Frequency Management, Chapter 4 – Allocations, Allotments and Plans.

#### *Table of Frequency Allocations*

##### *United States Table*

Federal Table	Non-Federal Table	FCC Rule Part(s)
2655-2690 Earth exploration-satellite (passive) Radio astronomy US269 Space research (passive)  US205	2655-2690 FIXED US205 MOBILE except aeronautical mobile Earth exploration-satellite (passive) Radio astronomy Space research (passive)  US385	Wireless Communications (27)

#### 2b. Additional Allocation Table Information

**US205** Tropospheric scatter systems are prohibited in the band 2500-2690 MHz

**US385** Radio astronomy observations may be made in the bands 1350-1400 MHz, 1718.8-1722.2 MHz, and 4950-4990 MHz on an unprotected basis, and in the band 2655-2690 MHz on a secondary basis, at the following radio astronomy observatories:

Allen Telescope Array, Hat Creek, CA	Rectangle between latitudes 40° 00' N and 42° 00' N and between longitudes 120° 15' W and 122° 15' W.
NASA Goldstone Deep Space Communications Complex, Goldstone, CA	80 kilometers (50 mile) radius centered on 35° 20' N, 116° 53' W.
National Astronomy and Ionosphere Center, Arecibo, PR	Rectangle between latitudes 17° 30' N and 19° 00' N and between longitudes 65° 10' W and 68° 00' W.
National Radio Astronomy Observatory,	Rectangle between latitudes 32° 30' N and 35° 30' N and between
Socorro, NM	longitudes 106° 00' W and 109° 00' W.

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**2655-2690 MHz**

National Radio Astronomy Observatory, Green Bank, WV		Rectangle between latitudes 37° 30' N and 39° 15' N and between longitudes 78° 30' W and 80° 30' W.
National Radio Astronomy Observatory, Very Long Baseline Array Stations		80 kilometer radius centered on:
North latitude		West longitude
Brewster, WA	48° 08'	119° 41'
Fort Davis, TX	30° 38'	103° 57'
Hancock, NH	42° 56'	71° 59'
Kitt Peak, AZ	31° 57'	111° 37'
Los Alamos, NM	35° 47'	106° 15'
Mauna Kea, HI	19° 48'	155° 27'
North Liberty, IA	41° 46'	91° 34'
Owens Valley, CA	37° 14'	118° 17'
Pie Town, NM	34° 18'	108° 07'
Saint Croix, VI	17° 45'	64° 35'
Owens Valley Radio Observatory, Big Pine, CA		Two contiguous rectangles, one between latitudes 36° 00' N and 37° 00' N and between longitudes 117° 40' W and 118° 30' W and the second between latitudes 37° 00' N and 38° 00' N and between longitudes 118° 00' W and 118° 50' W.

(a) In the bands 1350-1400 MHz and 4950-4990 MHz, every practicable effort will be made to avoid the assignment of frequencies to stations in the fixed and mobile services that could interfere with radio astronomy observations within the geographic areas given above. In addition, every practicable effort will be made to avoid assignment of frequencies in these bands to stations in the aeronautical mobile service which operate outside of those geographic areas, but which may cause harmful interference to the listed observatories. Should such assignments result in harmful interference to these observatories, the situation will be remedied to the extent practicable.

(b) In the band 2655-2690 MHz, for radio astronomy observations performed at the locations listed above, licensees are urged to coordinate their systems through the Electromagnetic Spectrum Management Unit, Division of Astronomical Sciences, National Science Foundation, Room 1030, 4201 Wilson Blvd., Arlington, VA 22230.

### 3a. Federal Agency Frequency Assignments Table

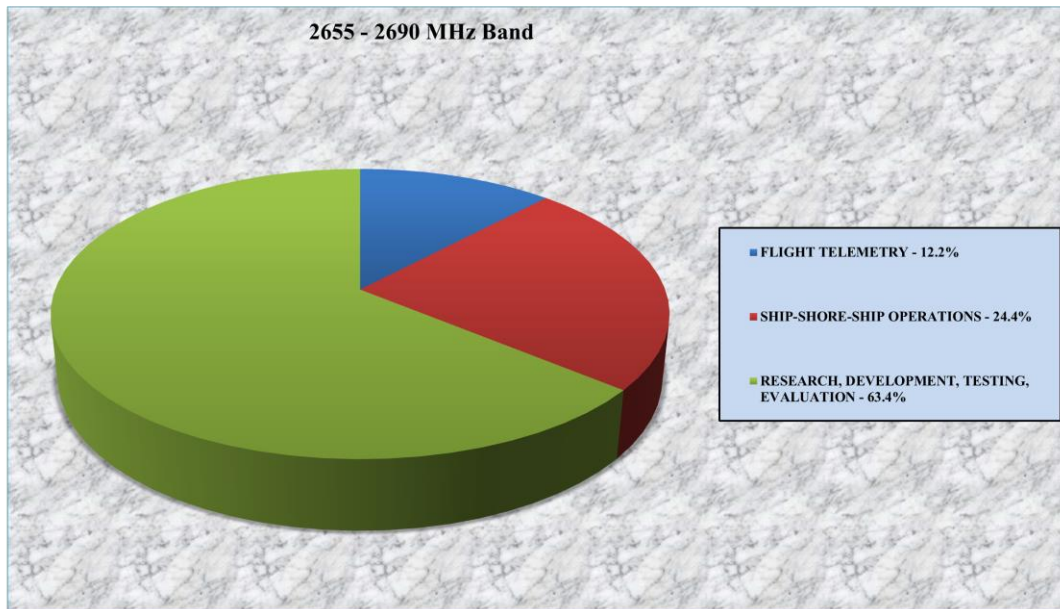
The following table identifies the frequency band, type(s) of allocation(s), types of applications, and the number of frequency assignments by agency.

*Federal Frequency Assignment Table*

2655-2690 MHz Band					
SHARED BAND					
AGENCY	TYPE OF APPLICATION				
	FIXED				
	EARTH EXPLORATION-SATELLITE (passive)				
	MOBILE (except aeronautical mobile)				
	RADIO ASTRONOMY				
	SPACE RESEARCH (passive)				
	TYPE OF APPLICATION				
	FLIGHT TELEMETRY	SHIP-SHORE-SHIP OPERATIONS		RESEARCH DEVELOPMENT TESTING EVALUATION	TOTAL
AF				25	25
N		10		1	11
NASA	5				5
<b>TOTAL</b>	<b>5</b>	<b>10</b>		<b>26</b>	<b>41</b>
The number of actual systems, or number of equipments, may exceed and sometimes far exceed, the number of frequency assignments in a band. Also, a frequency assignment may represent, a local, state, regional or nationwide authorization. Therefore, care must be taken in evaluating bands strictly on the basis of assignment counts or percentages of assignments.					

### **3b. Percentage of Frequency Assignments Chart**

The following chart displays the percentage of frequency assignments for the systems operating in the frequency band 2655-2690 MHz. The greatest use in the band is research, development, testing, and evaluation.



## **4. Frequency Band Analysis By Application**

The Air Force has the most assignments. These provide channels, at a number of locations in the United States, to train forces and are used on a strictly non-interference basis.

Other agencies conduct operations in the band. The Navy has some assignments used for shipboard calibration of U.S. Navy ships. The transmissions are in the shore-to-ship direction and are of limited duration. The spectrum is analyzed for use prior to transmitting. NASA has an assignment in one location for downlink of video for an unmanned aerial vehicle flown in the vicinity of the assigned location. DOE has a couple of assignments used for TV video links for live two-way classroom instruction.

The NSF uses this band for radio astronomy research via observations of the cosmos to study the low galactic background radiation, and both the ionized hydrogen clouds and

general diffuse radiation of the Galaxy. However, these passive operations are not recorded in the Government Master File.

The 2655-2690 MHz band is a shared Federal and non-Federal band. The primary non-Federal use is for the Broadband Radio Service (BRS), the licenses for which were awarded by the Federal Communications Commission (FCC) by auction in late 2009. The BRS is a flexible use service that can be used to accommodate a variety of fixed, portable, and mobile services, including high-speed broadband (such as internet access), video programming, and cellular communication services. The licenses are for specific service areas and subject to technical rules.

## **5. Planned Use**

The Federal use is expected to remain the same.