1670-1675 MHz

1. Band Introduction

The National Oceanic and Atmospheric Administration uses this frequency band to transmit environmental research and weather data from the Geosynchronous Operational Environmental Satellite (GOES) meteorological satellites. Earth stations in Virginia, Maryland, and Alaska receive the space-to-Earth transmissions. The meteorological data is essential for severe storm notification and related public safety activities. The data is used daily in the generation of weather reports that are broadcast over televisions and radio stations throughout the country.

2. Allocations

2a. Allocation Table

The frequency allocation table shown below is extracted from the Manual of Regulations and 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)
1670-1675 5.341 US211 US362	1670-1675 FIXED MOBILE except aeronautical mobile 5.341 US211 US362	Wireless Communications (27)

2b. Additional Allocation Table Information

5.341 In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.

US211 In the bands 1670-1690, 5000-5250 MHz and 10.7-11.7, 15.1365-15.35, 15.4-15.7, 22.5-22.55, 24-24.05, 31.0-31.3, 31.8-32.0, 40.5-42.5, 116-122.25, 123-130, 158.5-164, 167-168, 191.8-200, and 252-265 GHz, applicants for airborne or space station assignments are urged to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference; however, US74 applies.

US362 The band 1670-1675 MHz is allocated to the meteorological-satellite service (space-to-Earth) on a primary basis for Federal use. Earth station use of this allocation is

limited to Wallops Island, VA (37° 56' 44" N, 75° 27' 37" W), Fairbanks, AK (64° 58' 22" N, 147° 30' 04" W), and Greenbelt, MD (39° 00' 02" N, 76° 50' 29" W). Applicants for non-Federal stations within 100 kilometers of the Wallops Island or Fairbanks coordinates and within 65 kilometers of the Greenbelt coordinates shall notify NOAA in accordance with the procedures specified in 47 CFR 1.924.

3. Federal Agency Use

3a. Federal Agency Frequency Assignments Table

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

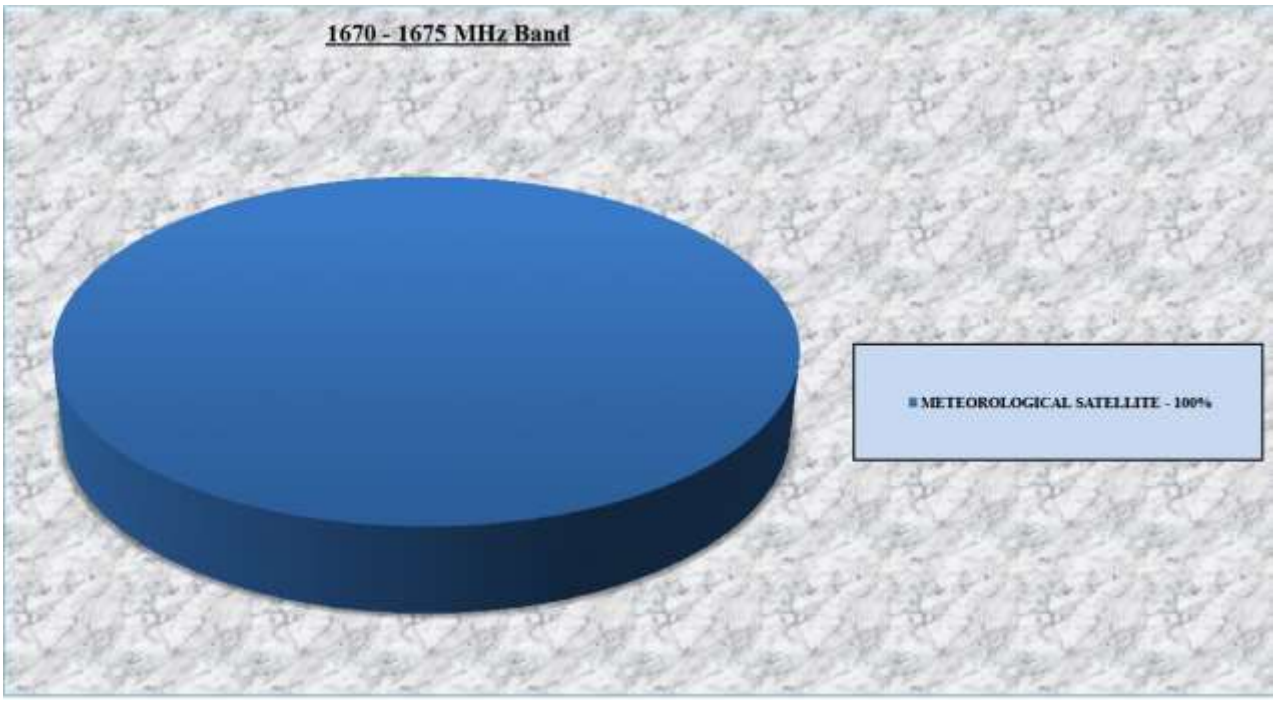
Federal Frequency Assignment Table

1670 - 1675 MHz Band			
SHARED BAND			
	FIXED **MOBILE except aeronautical mobile**		
	TYPE OF APPLICATION		
AGENCY	**METEOROLOGICAL SATELLITE**		**TOTAL**
DOC	**66**		**66**
TOTAL	**66**		**66**

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 1670-1675 MHz.



4. Frequency Band Analysis By Application

Federal use of this band includes operations in the meteorological-satellite service. The National Oceanic and Atmospheric Administration (NOAA) operates the Geosynchronous Operational Environmental Satellite (GOES) system, which uses this frequency band to transmit environmental research and weather data from the meteorological satellites to earth stations in Wallops Island, VA, Greenbelt, MD, and Fairbanks, AK. The space-to-Earth transmissions are afforded primary status, in accordance with Footnote US362 to the National Table of Frequency Allocations. The band supports efforts of the National Weather Service (NWS) to deliver accurate and timely weather information to the public. Figure 1 and Figure 2 show the locations of these earth stations.

Prospective users of the 1670 to 1675 MHz band are required to coordinate with NOAA. The critical natures of the sensor data (SD) downlink from GOES, makes this protection essential for the US national interest. Non-Federal users are required to protect Wallops Command and Data Acquisition Station (WCDAS) and Fairbanks Command and Data Acquisition Station (FCDAS) at all times, and the Wallops Back-Up (WBU) when it is active. The WBU, located at Goddard Space Flight Center, the FCDAS are used for test

and training purposes, and to replace the WCDAS capability in times of emergency, such as a hurricane, which could preclude the usage of WCDAS capabilities. According to Footnote US362 to the National Table of Frequency Allocations, non-Federal users applying for stations to use this band have to follow the coordination zone for each location.[1] Figures 1 and 2 show the coordination zones (100 km for Wallops Island, Virginia and Fairbanks, AK, and 65 km for Greenbelt, MD).

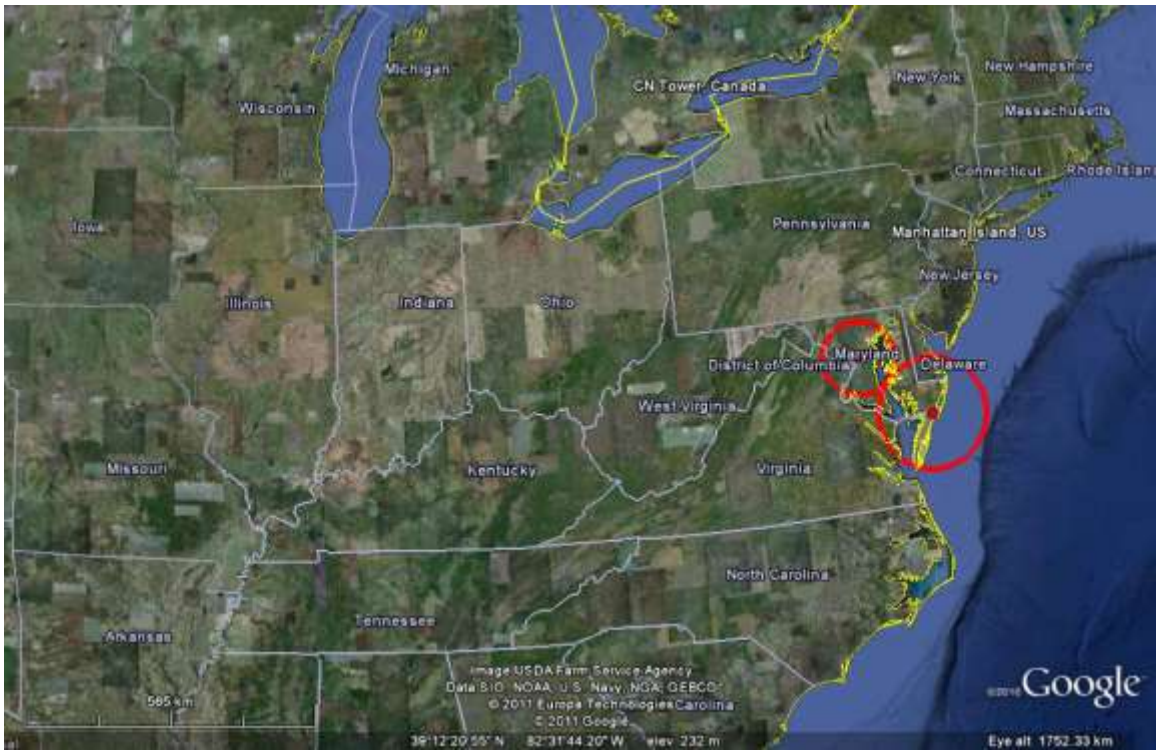


Figure 1. Federal Earth Stations Operating in the 1670-1675 MHz Band (Wallops Island, VA (100 km Coordination zone), and Greenbelt, MD (65 km Coordination Zone)

[1] Joint Spectrum Center, JSC-CR-05-122, NOAA GOES Sensor Date Downlink Coordination Zones for Proposed Transmitters in the 1670 to 1675-MHz Frequency Band (December 2005).

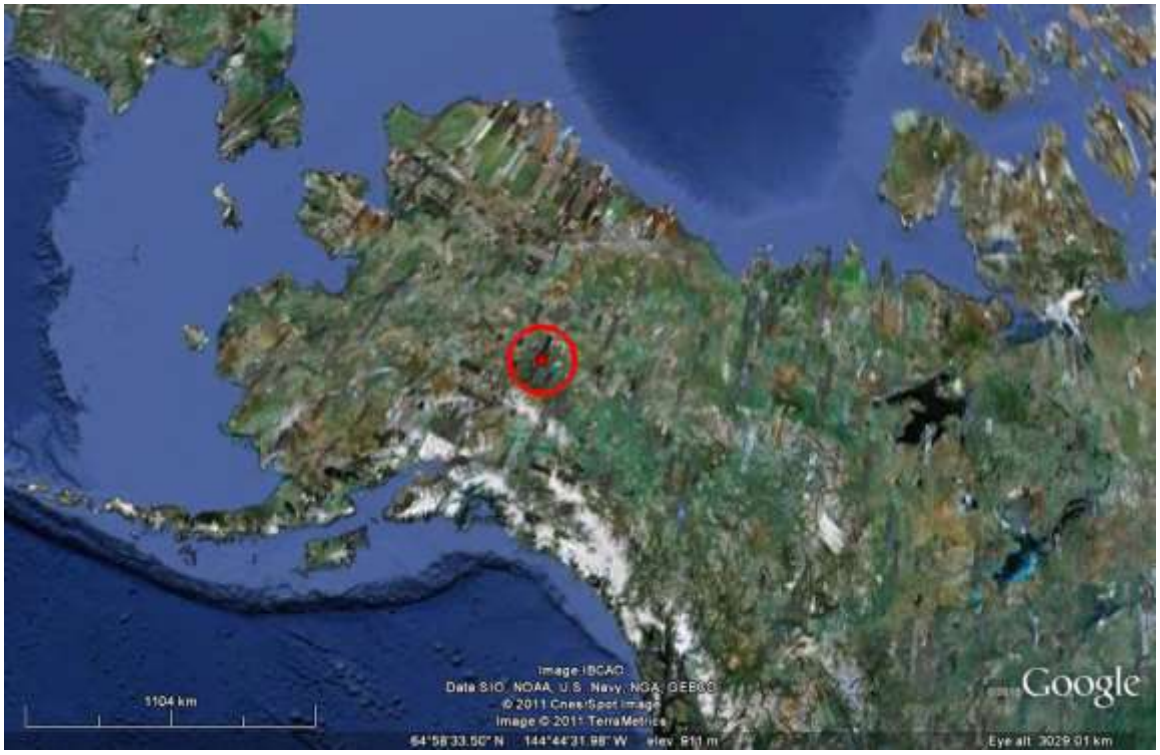


Figure 2. Federal Earth Stations Operating in the 1670-1675 MHz Band (Fairbanks, AK 100 km Coordination Zone)

5. Planned Use

NOAA will continue to operate meteorological satellite earth stations at Wallops Island, VA, Greenbelt, MD, and Fairbanks, AK within the coordination zones in the 1670-1675 MHz band for the foreseeable future.