

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WH9XVR

(Call Sign)

XT MO

(Class of Station)

0695-EX-ST-2014

(File Number)

NAME Orbital Sciences Corporation

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

Orbital Sciences Corporation will utilize the Antares Launch Vehicle to deliver the Cygnus Spacecraft to Low Earth Orbit

Station Locations

- (1) MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28
- (2) MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28
- (3) MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28

Frequency Information

MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2239.76-2243.24 MHz	MO	3M48F1D	3.3 W (ERP)	0.002 %
2267.76-2271.24 MHz	MO	3M48F1D	4.1 W (ERP)	0.002 %

This authorization effective September 14, 2014 and
will expire 3:00 A.M. EST March 15, 2015

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2286.76-2290.24 MHz	MO	3M48F1D	3.4 W (ERP)	0.002 %

MOBILE: From WFF, VA launch into low earth orbit., centered around NL 37-49-52; WL 75-29-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5758-5772 MHz	MO	14M0P0N	302 W (ERP)	2 %

Special Conditions:

- (1) All Orbital Sciences operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized federal stations.
- (2) All operations shall be limited to telemetry and tracking. This STA is limited to the single Antares launch scheduled for no earlier than 14 September, 2014, to support the delivery of the Cygnus Spacecraft to Low Earth Orbit as part of the NASA Commercial Orbital Services (COTS) program. This STA will expire as soon as the launch has been completed or by 14 March 2015, whichever occurs first. Any future launches will need to submit applications to the FCC to be re-coordinated with NTIA.
- (3) Orbital Sciences shall be aware that future non-federal launches will be considered on a case-by-case basis, especially for requests in the band 2200-2290 MHz, and Orbital Sciences shall have no expectations that future launches will be approved.
- (4) 2286.76-2290.24 MHz transmission shall be terminated prior to the LV (Antares) coming into view of the NASA Madrid deep space communications complex to prevent interference. Link termination time for this link and planned vehicle trajectory shall be provided no later than seven days prior to the planned launch to Farzin Manshadi (Farzin.manshadi@jpl.nasa.gov, 818-354-0068).
- (5) As soon as possible, but no later than seven days prior to the planned launch, Orbital Sciences is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@us.af.mil, (301-225- 3729), Air Force Spectrum Management Office (AFSMO), Rich Rood (richard.l.rood@nasa.gov, 661-276-2138, NASA Dryden SMO), Farzin Manshadi (farzin.manshadi@jpl.nasa.gov, 818-354-0068, NASA JPL/DSN SMO), Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO), Vip Vipavetz (kevin.g.vipavetz@nasa.gov, 757-864-3817, NASA LARC SMO), the NOAA Satellite Operations Control Center (SOCC) Shift Supervisor (301) 817-4198 with the planned launch date/time/window/duration. In the event of last minute changes, 48 hour notice is requested.

Special Conditions:

- (6) Prior to transmitting at Wallops Flight Facility, Wallops Island, VA, Orbital Sciences shall coordinate and schedule their operations through NASA POC's as specified in NASA/OSC service Agreements and copy WFF Spectrum Manager, Felipe Arroyo, (felipe.arroyo-1@nasa.gov, 757-824-1623) , and Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO).
- (7) The STOP BUZZER POC information, for launch operations shall be provided to NTIA (bmitchell@ntia.doc.gov). This phone shall be manned 24/7.
- (8) All transmissions in the band 2200-2290 MHz will comply with national and international power flux-density limits.
- (9) Orbital Sciences shall keep a log of all transmissions in the band 2200-2290 MHz that would be provided to NTIA after the mission. This log should include at least date, time, frequency, eirp density, and pointing direction of the antenna. The log should be provided to the following people at NTIA: bmitchell@ntia.doc.gov and edrocella@ntia.doc.gov.
- (10) Orbital Sciences must coordinate with the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon (540) 653-3477, or james.moneyhon@navy.mil a minimum of 30-days prior to any operations to mitigate harmful interference to Navy and Marine Corps operations. Orbital Sciences must also comply with any and all restrictions that may be levied by the Naval Surface Warfare Center, Dahlgren Division (NSWCDD).