

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

EXPERIMENTAL

(Nature of Service)

WF9XMI

(Call Sign)

XR MO

(Class of Station)

0139-EX-ST-2012

(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 Launch Pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, centered around NL 37-49-52; WL 75-29-28
- (2) MOBILE: From launch pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, centered around NL 37-49-52; WL 75-29-28
- (3) MOBILE: From launch pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, centered around NL 37-49-52; WL 75-29-28

Frequency Information

MOBILE: From Launch Pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, centered around NL 37-49-52; WL 75-29-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2222.6-2228.4 MHz	MO	5M80F1F	5.8 W (ERP)	0.002 %

This authorization effective October 23, 2012 and
will expire 3:00 A.M. EST April 23, 2013

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: From Launch Pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, 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	4.6 W (ERP)	0.002 %
2258.71-2260.29 MHz	MO	1M58F1D	2.8 W (ERP)	0.002 %
2267.76-2271.24 MHz	MO	3M48F1D	1.3 W (ERP)	0.002 %

MOBILE: From launch pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, 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	2.6 W (ERP)	0.002 %

MOBILE: From launch pad 0A at Wallops Flight Facility in Virginia through trajectory of launch mission into Low Earth Orbit - 350 km altitude, 52 degrees inclination, centered around NL 37-49-52; WL 75-29-28

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5758-5772 MHz	MO	14M0P0N	400 W (ERP)	2 %

Special Conditions:

- (1) All OSC 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, tracking, and control (TT&C). Use of this STA is for a single demonstration of a low-cost, commercial launch capability. This STA is limited to the single Antares test flight launch scheduled for the period [1July through 30 October 2012][NTIA is willing to work with the FCC on the specific dates]. This STA will expire as soon as this launch has been completed. Any future launches will need to submit applications to the FCC to be re-coordinated with NTIA.

Special Conditions:

- (3) OSC 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 OSC shall have no expectations that future launches will be approved.
- (4) Prior to transmitting at Wallops Flight Facility, OSC shall coordinate and schedule their operations through NASA POC's as specified in NASA/OSC service agreements
- (5) At least 48 hours prior to the planned test flight launch, OSC is required to provide Mr. Jimmy Nguyen (jimmy.nguyen@pentagon.af.mil, 301-225-3866), Air Force Spectrum Management Office (AFSMO) with the planned test flight launch date/time/window/duration.
- (6) Prior to FCC granting this STA, OSC shall provide STOP BUZZER POC information, both for ground testing and for launch/on-orbit/reentry operations, to skotler@ntia.doc.gov, edavison@ntia.doc.gov, Jimmy.Nguyen@pentagon.af.mil, steven.f.schindler@nasa.gov, vincent.s.galbraith@nasa.gov, felipe.arroyo-1@nasa.gov, and catherine.c.sham@nasa.gov.
- (7) All transmissions in the band 2200-2290 MHz will comply with national and international power flux-density (PFD) limits. Before the authorization is granted, OSC shall submit the duration of the use of each frequency in the band 2200-2290 MHz, i.e., when the transmissions will cease.
- (8) OSC 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 transmitting antenna. The log should be provided to the following people at NTIA: skotler@ntia.doc.gov and edavison@ntia.doc.gov.
- (9) This license supersedes previous grant to modify the authorized powers.
- (10) This licensee supersedes the previous grant to extend the license effective dates due to delays.