

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

EXPERIMENTAL

(Nature of Service)

WJ9XLV

(Call Sign)

XT MO

(Class of Station)

1334-EX-ST-2015

(File Number)

NAME Orbital ATK , Inc.

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:

Spacecraft telemetry links for monitoring of Cygnus spacecraft state of health.

Telemetry links include:

1334-EX-ST-2015 (2015) 1334-EX-ST-2015 (2015) 1334-EX-ST-2015 (2015) 1334-EX-ST-2015 (2015) 1334-EX-ST-2015 (2015)

Station Locations

(1) MOBILE: Spacecraft-350km altitude-51.6 degrees inclination

Frequency Information

MOBILE: Spacecraft-350km altitude-51.6 degrees inclination

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2205 MHz	MO	4M20G1D	0.9 W (ERP)	0.00045 %
2216 MHz	MO	3M00G1D 6M00G1D	2.01 W (ERP)	0.00003 %
2287.5 MHz	MO	6M16G1D	3.77 W (ERP)	0.00003 %

This authorization effective March 08, 2016 and
will expire 3:00 A.M. EST September 08, 2016

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

MOBILE: Spacecraft-350km altitude-51.6 degrees inclination

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2287.5 MHz	MO	4M98G1D	3.77 W (ERP)	0.00003 %
2287.5 MHz	MO	3M00G1D	3.77 W (ERP)	0.00003 %

Special Conditions:

- (1) 1. All OA operations granted on an experimental basis shall be on an unprotected, non-interference basis to authorized stations. All spacecraft transmission to the ground shall be pre-coordinated for clearance for operation in accordance with each conditions specified below.
2. This STA is limited to no earlier than March 8, 2016, to support the Cygnus telemetry, tracking, and command, for the upcoming OA-6 mission to the International Space Station. This STA expires upon completion of ISS cargo mission, typically 8-days post Cygnus separation from the ISS or September 8, 2016, whichever comes first. Applications for any future launches will need to be submitted to the FCC to be re-coordinated with NTIA.
3. As soon as possible, but no later than 14 business days prior to the planned launch, Orbital-ATK is required to provide, as a minimum, planned launch date/time/window/duration/trajectory/communications frequencies and modes to Jimmy Nguyen (jimmy.nguyen@us.af.mil, AFSMO), NASA/Scott Galbraith (vincent.s.galbraith@nasa.gov), Farzin Manshadi (Farzin.manshadi-1@nasa.gov), Rich Rood (richard.l.rood@nasa.gov), Cathy Sham (catherine.c.sham@nasa.gov) and NOAA CDAS Philip Whaley, (Philip.l.whaley@noaa.gov) 757-824-7331, ext. 331. In the event of last minute changes, 48-hour notice is required.
4. Prior to transmitting at Cape Canaveral AFS, Florida or Kennedy Space Center, Florida, Orbital-ATK shall coordinate their operations by contacting the following:
- Steven Schindler (steven.f.schindler@nasa.gov, 321-867-2520, NASA KSC SMO)
 - Ashley Stockbridge (ashley.n.stockbridge@nasa.gov, 321.867.0218, NASA KSC SMO)
 - Scott Galbraith (vincent.s.galbraith@nasa.gov, 301-286-5089, NASA GSFC SMO)
 - Steve Parish (Stephen.Parish.1@us.af.mil, 321-853-2012)
5. During Cygnus on-orbit mission phase (free flight or attached to the International Space Station), operation is coordinated with NASA JSC SMO (Cathy Sham, catherine.c.sham@nasa.gov, 281.483-0124) at least 4 business days prior to any planned transmission operation. For departure/re-entry support, coordination will be initiated at least 14 business days prior to the communications activation for departure and re-entry/splashdown support. Planned communication timeline with start/end time, receiving ground station locations, transmit parameters/power/bandwidth and spacecraft trajectory/orbital locations shall be provided at the time of initiating coordination request.
6. All transmissions in the band 2200-2290 MHz shall comply with national and international power flux-density limits, except in cases where expected exceedance are pre-coordinated and agreed. The FCC shall ensure that Orbital Sciences Corporation is aware that future requests will be considered on a case-by-case basis, especially for requests in the band 2200-2290 MHz, and that Orbital Sciences Corporation shall have no expectations that future applications will be approved.
7. Orbital ATK, Inc. must be made aware that due to potential harmful interference to Naval activities, an OA Cygnus RF operations plan shall be submitted at least 30-days prior to the planned launch date, to the Naval Surface Warfare Center, Dahlgren Division (NSWCDD), Mr. James Moneyhon (540)653-3477, or

Specific to James S. Moneyhon@navy.mil, for assessment. A blackout zone of a 1500 nautical mile radius centered at 22N160W shall be assumed unless otherwise coordinated and agreed by the NSWCDD.

- (2) This license supersedes previous grant to revise special condition 2 and effective dates of the license.