

URGENT – EXPEDITED TREATMENT REQUESTED

Description of Operations and Public Interest Statement

Pursuant to 47 CFR 25.120 of the Commission’s Rules, Lockheed Martin Corporation (“Lockheed Martin”) hereby requests Special Temporary Authority (“STA”) for a period of thirty (30) days to operate its Carpentersville, New Jersey fixed earth station (Call Sign E7541) to provide telemetry, tracking, and control (“TT&C”) functions during the Launch and Early Operations Phase (“LEOP”) period of ranging and propulsion monitoring for the JCSAT-18 satellite. JCSAT-18 is intended to be launched on December 15, 2019. For the reasons outlined below, Lockheed Martin requests expedited treatment of this urgent request.

JCSAT-18 will be operated by SKY Perfect JSAT Corporation (“JSAT”). JSAT had contracted with Intelsat for the provision of critical ground station launch support. Intelsat had dedicated an antenna at its Castle Rock, CO facility for launch support.

Lockheed Martin understands from Intelsat that its Castle Rock antenna has suffered a structural failure, and Intelsat has requested that Lockheed Martin provide either primary or secondary support for the JCSAT-18 launch, pending the outcome of efforts to repair the Castle Rock antenna system. Accordingly, and given the significant safety implications of ensuring proper ground system support for the launch, Lockheed Martin urgently requests authority to begin communications on December 14, 2019, in preparation for LEOP activity.¹

1. Requested STA Operations

The TT&C and ranging signals will be transmitted partly in the standard Ku-band for which Lockheed Martin already has authority under Call Sign E7541. As to the instant request for STA, Lockheed Martin seeks herein authority to communicate with JCSAT-18 as a point of communication and has identified all of the Ku-band frequencies that it requires in the attached technical exhibit. In all other respects, operation of the earth station will be consistent with the parameters set forth under the existing permanent authority.

In order to demonstrate compliance with FCC Report and Order 96-377 regarding operations in the extended Ku-band, Lockheed Martin submits herewith an analysis that states that the proposed operations pose no risk of interference either to U.S. Navy shipboard radar operations or to NASA TDRSS links.

¹ Proposed test transmissions would occur over a period of approximately one to two days. During these tests, the earth station would not be communicating with any satellite; instead, the transmissions will be made with the antenna at zenith to verify RF functionality

Lockheed Martin designates Michael Usarzewicz to be the contact person that will be available whenever transmission to JCSAT-18 is to occur through the subject earth station. Mr. Usarzewicz can be reached at the following phone numbers:

(609) 865-2658 (cellular)
(908) 859-4050 (earth station desk)

2. Grant of the Requested Authority Will Serve the Public Interest

Lockheed Martin believes that the limited, but critical, operations it proposes in support of the launch of the JCSAT-18 satellite serve the public interest. Lockheed Martin understands that the JCSAT-18 satellite will ultimately be positioned at the 150.0 E.L. orbital position.

Lockheed Martin's Carpentersville earth station will be part of a network of control and ranging facilities that will be used solely to position the satellite as it progresses in transfer to its final location and to calibrate propulsion. No end user service will be provided within the United States at any time. The safe and orderly use of the entire geostationary orbital resource and protection of the hundreds of satellites licensed by the U.S. and other countries that operate there depends in no small part on ensuring that the JCSAT-18 satellite is controlled while over North America en route to its final geostationary orbital position. In this regard, Lockheed Martin's earth station thus will serve a vital function.

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Lockheed Martin requests expedited authority to operate its Carpentersville, NJ earth station antenna to provide critical TT&C and ranging services during the JCSAT-18 mission, for a term of 30 days, commencing December 14, 2019.

TECHNICAL DETAILS OF SPECIAL TEMPORARY AUTHORITY

Satellite Characteristics

Satellite: JCSAT-18 LEOP mission

Orbital Location: 150.0 E.L.

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Earth Station Characteristics

Antenna: 14.2-m TIW Systems

Antenna Location: 40°38' 39.1" N / 075° 11' 27.8" W

Telecommand Uplink Frequencies:

13752.5 MHz (V/RHCP)

14499.0 MHz (V/RHCP)

Telemetry Downlink Frequencies:

12748.5 MHz (V/RHCP)

12749.5 MHz (V/RHCP)

Antenna Gain: 63.5 dBi @ 14 GHz

Antenna Power: 19.1 dBW (into the flange)

Maximum EIRP: 83.0 dBW for all carriers

EIRP Density: 23.0 dBW/4kHz

Uplink Emission: 1M30F2D (FM, BPSK)

Downlink Emission: 300KG2D (PCM, BPSK)