



UNITED STATES DEPARTMENT OF COMMERCE  
National Telecommunications and  
Information Administration  
Washington, D.C. 20230

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FOR AGENDA

SSS-105158

## MEMORANDUM

TO: Shaobei Xu  
Air Force Spectrum Management Office

FROM: Brandon Mitchell   
Chair, IRAC Space Systems Subcommittee (SSS)

**SUBJECT:** Air Force Request for Waiver from ITU International Registration of the STPSat-4 Satellite TT&C.

The Air Force, in its letter dated 23 June 2017 requests a waiver from the National Telecommunications and Information Administration (NTIA) for the STPSat-4 satellite (*see* SSS-102094).

The STPSat-4 satellite is a new Department of Defense (DoD) Space Test Program (STP) satellite. The STPSat-4 will host space technology experimental payloads such as the Air Force Research Laboratory (AFRL) Modular RF Tile L-band Experiment and other U.S. Air Force Academy undergraduate student education projects. The AFRL L-band experiment will be the only active transmitter while all other onboard payloads on the STPSat-4 satellite are passive devices. The STPSat-4 satellite is currently scheduled for launch in February 2018 and the intended use is less than one year.

The STPSat-4 satellite is a non-geosynchronous satellite with apogee and perigee of 400 km and an inclination angle of 51.6 degrees. The satellite will transmit on a of 2277.9 MHz (space-to-Earth) with a 437KG1D and 875KG1D (power of 2 Watt) emissions while in view of the ground stations located at Colorado Spring, CO and Houston, TX. The STPSat-4 receives on 2097.566 MHz (Earth-to-space) with 17K2G1D emission from the ground stations located Colorado Spring, CO and Houston, TX (*see* SPS-22315/1 and SPS-22567/1).

Based on the Air Force intended operational period of less than 12 months for the STPSat-4 satellite mission, Air Force requests a waiver from an international registration with the ITU Radiocommunication Bureau (BR) under Section 3.3.1.2 of the NTIA Manual, "Exemption Requests for Submitting Space System Information to the BR." This section provides that the practice of the United States is not to submit space system information to the BR if the intended length of the missions is 12 months or less.

This section of the Manual also states that:

An agency requesting exemption from international registration for a particular satellite system shall submit a request that the international registration be waived to the SSS.

The submission to the SSS shall include the following:

- a. a statement that the agency has reviewed the existing satellite systems registered with the ITU and determined their system is compatible;
- b. a statement that the agency will continue to monitor the international registration process for satellite systems that operate co-channel to the system for which they have requested a waiver and be responsible for taking the measures necessary to ensure compatibility with any new systems; and
- c. a statement that the agency recognizes that should a waiver of the international registration requirement be approved and interference occurs to or from their unregistered system, they have no status or rights under the ITU Radio Regulations (RR). Agencies operating such a system, without the benefit of the recognition and protection afforded by the international registration process, assume full responsibility for making modifications required to resolve any interference problems with systems operating in accordance with the RR.

The SSS and NTIA reviewed the request by Air Force to waive the international registration of the above subject operation. Air Force has fulfilled the requirements listed above. The SSS has no objections to the waiver being granted. Accordingly, NTIA hereby grants Air Force a waiver from international registration of the STPSAT-4 satellite.

NTIA grants this waiver subject to the following conditions:

1. Air Force shall continue to monitor the international process for systems that operate co-channel to this system and be responsible for taking the necessary measures concerning any new system that may not be compatible.
2. Air Force recognizes that this system will have no status or rights under the RR. If there is interference to or from this system, Air Force shall immediately make modifications to resolve all cases of interference.

The SSS Chair shall forward this memo to the IRAC, the Spectrum Planning Subcommittee, and the Frequency Assignment Subcommittee for information.