

REQUEST FOR EXPERIMENTAL SPECIAL TEMPORARY AUTHORITY

BlackSky, LLC (“BlackSky”) herein requests experimental Special Temporary Authority (“STA”) to demonstrate and test the use of two microsattellites in the manner described below.

Purpose of Special Temporary Authority.

BlackSky seeks to test, develop, and demonstrate the efficacy and design of a newly configured microsattellites, including associated software applications, relative to their ability to provide high-resolution remote sensing in the Earth Exploration Satellite Service (“EESS”). To this end, BlackSky seeks experimental STA to launch, test, and demonstrate¹ two prototype satellites – Scout 1 and Scout 2 – anticipated to be launched and ready for testing in approximately November 1, 2014,² for a period of up to six (6) months.

The launch and operation of the subject microsattellites on the basis of such authority will permit BlackSky the opportunity to assemble critical feedback both as to the performance of the microsattellites themselves and the overall architecture of the proposed imaging and communications system.

BlackSky brings to the Commission’s attention that it has also submitted an application for authority to operate the Scout 1 and Scout 2 microsattellites with the National Oceanographic and Atmospheric Administration (“NOAA”). Additionally, BlackSky is submitting herewith an analysis it performed to satisfy the Commission’s Orbital Debris Assessment requirements. Finally, BlackSky has also rendered the application data in an exhibit formatted to facilitate its analysis by the NTIA.

Operational Description.

BlackSky is developing plans to deploy two satellites intended to demonstrate the technology and to experiment with configurations and processes. The satellites are proposed for launch to Low Earth Orbit on a Roscosmos Soyuz launch vehicle. Scouts 1 and 2 will be deployed from the Soyuz upper stage into a planned circular orbit of 600 x

¹ BlackSky has followed herein the Commission’s policy articulated regarding the seeking of STA for such purposes. See *Guidance on Obtaining Experimental Authorizations for Commercial Space Launch Activities*, Public Notice, DA 13-446 (rel. Mar. 15, 2013).

² Because BlackSky is submitting the instant application well in advance of when it needs such authority and of the proposed launch of the subject microsattellites, it is requesting a start date of November 10, 2014, with the possibility that the microsattellites may be ready for testing later than, but not earlier than, that date.

600 km at 97.8 degrees inclination approximately 1 week after the primary payload's (Meteor) separation from the launch vehicle.

Once in orbit, the demonstration and testing will focus on each satellite's subsystems and their collective interaction, as well as the ability to communicate with and control the satellites, test the imaging capability of the satellites, and ascertain the actual throughput of imaging data from the satellite to ground stations³ and the BlackSky network operations center.

The technical details of the space segment are as follows:

Scout 1 and 2 frequency characteristics:

Primary Payload Downlink:	8080 MHz ± 80.0 MHz
Secondary TT&C Downlink:	401-402 MHz
Primary TT&C Uplink ⁴ :	2071.88MHz ± 25KHz
Secondary TT&C Uplink:	449.75 – 451.25 MHz

Scout 1 and 2 radio characteristics:

<i>Frequencies</i>	<i>Manufacturer</i>	<i>Model Number</i>
X-Band	Syrlinks	EWC22
S-Band	Quasonix	QSX-RDMS-T-1100-AB-RS
UHF	L3 Communications	CADET-UHF

Scout 1 and 2 antenna characteristics:

X-Band (Tx):

15 dBi patch antenna, 18 degree half power beamwidth, nadir pointing
45° RHCP in horizontal orientation; 45° RHCP in vertical orientation

S-Band (Rx):

6 dBi patch antenna, 90 degree half power beamwidth, nadir pointing
45° RHCP in horizontal orientation; 45° RHCP in vertical orientation

UHF (Tx/Rx):

2.15 dBi non-directional monopole, 156 degree half power beamwidth
Linear polarization

³ BlackSky notes that it has not yet finalized the exact location of the ground station that will communicate with Scout 1 and Scout 2 for communications and control purposes. Once it has completed its assessment of available locations, BlackSky will be submitting a further application for experimental STA to license that facility, as well.

⁴ BlackSky is providing in this exhibit the proposed uplink frequencies only as informational. These frequencies will be the subject of a separate application for experimental earth station authority. *See* n.3.

24-hour contact details:

BlackSky maintains a 24-hour, 7-day-per-week hotline at its Mission Control Center, which can be reached at the following telephone number for any interference issues: (425) 998-7370.