

Woodbine Description of Research Project

American Aerospace has been working with the New Jersey Institute of Technology (NJIT) performing Unmanned Aircraft Systems (UAS) flight tests and collecting data to further the integration of UAS into the National Airspace System (NAS). American Aerospace has also been working with energy companies on new technologies to improve infrastructure inspection. The purpose of this research project is to continue collecting data for UAS NAS integration as well as testing UAS carrying airborne sensors to inspect infrastructure. The UAS being used for this project are larger and more complex than smaller drones that fall under FAA Part 107.

Flight operations will be conducted under Certificate of Authorization (COA) 2020-ESA-6229, issued to NJIT, covering the area depicted in Figure 1. The COA allows the UAS to fly within the boundary (shown in yellow), at an altitude up to 5,000' MSL. The ground station will be located at Woodbine Airport (KOB) indicated by the red star (39-13-08.9000N 074-47-41.1000W), thus creating a maximum range of 65km.

American Aerospace has been collaborating with the FAA on the use of RF spectrum for the purpose of UAS Command and Control (C2) links. For this project we are seeking FCC approval to operate within the C Band (4430MHz-4900MHz) for C2.

For payload telemetry we are seeking FCC approval to operate in the S Band, using ISM frequencies (2400MHz-2500MHz) but at RF power levels that exceed ISM limits.

As part of NAS integration experiments, American Aerospace will also be collecting data on the use of airborne radars as part of a Detect-and-Avoid (DAA) system. The DAA radar equipment will only be used to collect experimental data, not for collision avoidance. The radar equipment operates in the K Band.

Area Flight Ops Area Points

Latitude	Longitude
38°59'25"N	75°5'50"W
39°4'2"N	75°4'56"W
39°7'18"N	74°5'23"W
39°10'22"N	74°5'10"W
39°13'56"N	74°5'29"W
39°21'46"N	74°5'18"W
39°20'12"N	74°44'36"W
39°10'48"N	74°34'44"W
39°4'25"N	74°39'52"W
38°58'27"N	74°38'47"W
38°47'55"N	74°53'4"W
38°41'42"N	75°3'11"W
38°46'58"N	75°12'17"W

Figure 1

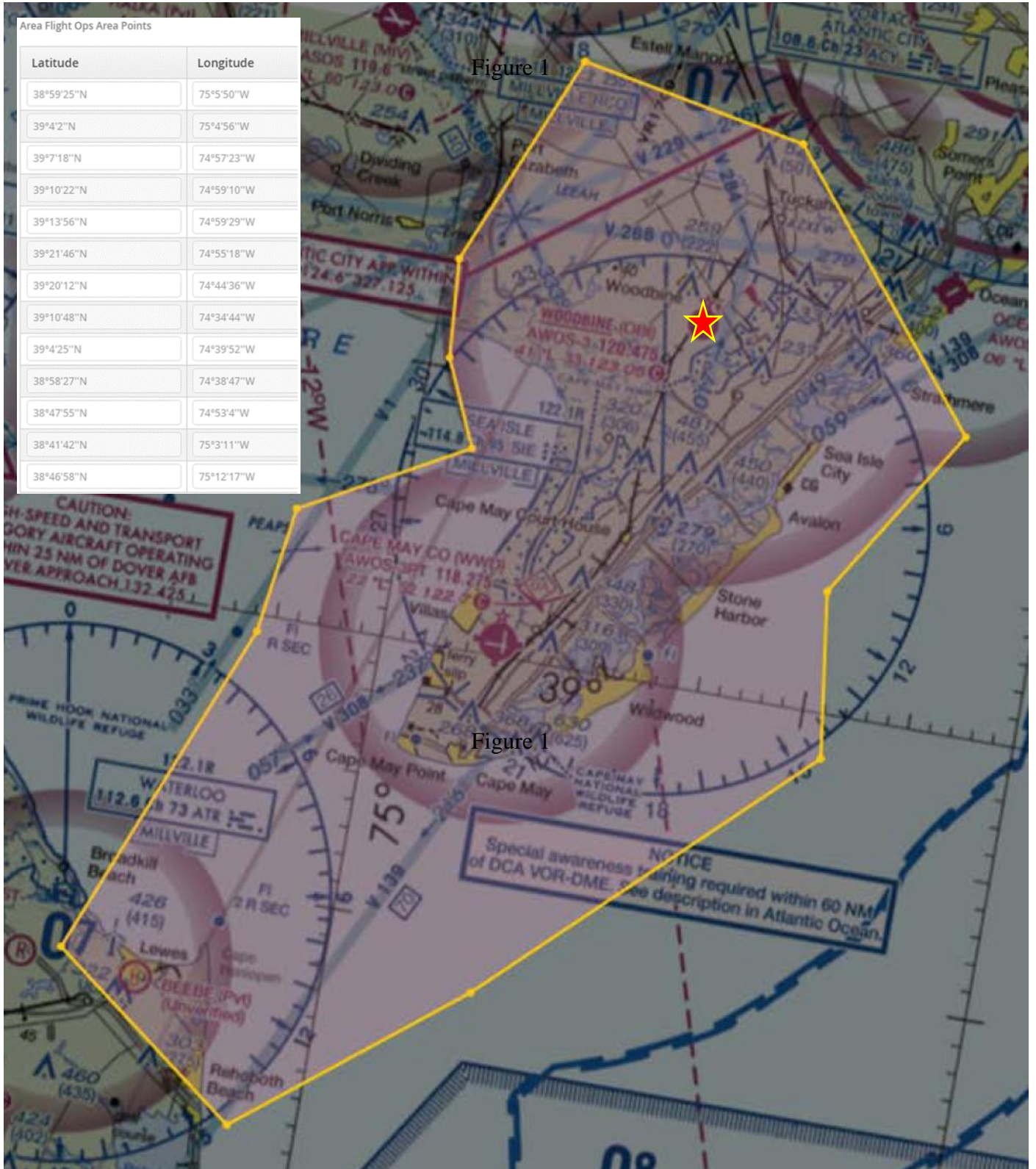


Figure 1