

# STATEMENT ACCOMPANYING REQUEST FOR EXPERIMENTAL AUTHORIZATION

## 1. Introduction

AeroVironment, Inc. (AV) designs, develops, manufactures, supports and operates unmanned aircraft systems (“UAS”). By this application, AV requests that the Commission grant an experimental license to operate in 5040.8825 MHz at its laboratory facilities in Simi Valley, CA and Moorpark, CA:

- Simi Valley, Ventura County, CA- North 34° 16’ 58” West 118° 46’ 45”
- Moorpark, Ventura County, CA- North 34° 17’ 13” West 118° 52’ 9”

These tests, which are confined to a laboratory environment are in further support of AeroVironment’s SunGlider High Altitude Platform System (HAPS) for unmanned aircraft. The project is a solar-powered high-altitude long-endurance (HALE) unmanned aircraft.

The following summarizes the further testing proposed, the reasons underlying the effort and the technical parameters of the intended operations.

## 2. Purpose and Technology

The Harris p/n 102721-001 will access 5040.8825 MHz to send ground based command and control data to and from the UAS. Operations will be consistent with RTCA DO-362 including that the technology will select a discrete channel. The waveform is compatible the Command and Control (C2) Data Link Minimum Operational Performance Standards (MOPS).

## 3. Deference to Licensed Users

AeroVironment commits to operations respecting other users of the band and those in adjacent segments.

## 4. Coordination with the Federal Aviation Administration

A coordination request was submitted to the Federal Aviation Administration (FAA) as to 5040.8825 MHz. The coordination documents of FAA Spectrum Engineering are provided as separate attachments.

## 5. Nature of Operations

The operations proposed are laboratory tests. No flights are proposed.

## 6. Stop Buzzer

Bart Decker, Flight Standards Manager, is available at phone number (805) 391-1335 and will act as a “stop buzzer” if any matters involving interference arise during the testing.

## 7. Transmitting Equipment

The transmitting equipment for 5040.8825 is Harris p/n 102721. It is experimental.

## 8. Antenna

For the 5040.8825 MHz tests, the following is the antenna information. The data sheets are provided in a separate attachment.

<b>Antenna</b>	<b>Gain</b>	<b>Polarization</b>	<b>Orientation in Vertical Plane</b>	<b>Orientation in Horizontal Plane</b>
Ground SWA 1055-034	15	Vertical	32	55
Haigh-Farr	BN1-13110	attachment	attachment	attachment

## 9. Restrictions on Operations and Interference Protection

AeroVironment understands that experimental operations must not cause harmful interference to authorized facilities. Should any interference occur, AeroVironment will take immediate steps to resolve the interference, including, if necessary, discontinuing operations.

## 10. Waiver of Station Identification Requirements

AeroVironment asks for a waiver of the station identification requirements stated in Section 5.115 of the Commission's rules.

## 11. Diagram

A diagram of the operations is provided.

## Conclusion

AeroVironment appreciates very much the consideration of the Commission, NTIA, FAA, DoD and other agencies reviewing this application.