

DAGSI Research Topic

1. **Research Title:** Automated High Gain GNSS Signal Characterization Study

2. **Individual Sponsor:**

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3. **Academic Area/Field and Education Level**

Electrical Engineering / Signal Processing (MS, PhD level)

4. **Objectives:** AFRL is interested in developing an automated, high gain signal collection and characterization capability to better understand the nominal navigation performance of multi-GNSS signals. Future navigation systems may utilize satellites from multiple GNSS constellations and constantly updated signal and constellation situational awareness is required.

5. **Description:** This project will utilize high gain signal collection assets at AFRL/RWYN and at the student's home university. Algorithms developed should be able to rapidly (<10 seconds) determine if signal quality has varied significantly from an established baseline and collect extended sample sets when needed. It is desired to sample and analyze all overhead satellites as quickly as possible to allow for multiple contacts within a given satellite pass.

6. **Research Classification/Restrictions:** Unclassified research

7. **Eligible Research Institutions:** State of Ohio Universities

NOTE: Topics submitted to DAGSI must be approved for public release. Need PA Approval #