SOURCES SOUGHT NOTICE

High-Performance Quantum Scalar Magnetometers

1. Introduction

This is a Sources Sought Notice issued for market research purposes only. This is **NOT** a Request for Proposal (RFP), Request for Quotation (RFQ), or an Invitation for Bid (IFB). It does not constitute a commitment by the Government to issue a solicitation, award a contract, or pay for any information submitted in response to this notice.

The USAF Academy (USAFA) is seeking to identify capable sources, particularly small business concerns, that can provide commercially available, high-performance quantum scalar magnetometers meeting the salient characteristics outlined below.

2. Applicable Codes

Classification / Code Type	Value / Description
North American Industry Classification System (NAICS) Code	334519 — Other Measuring and Controlling Device Manufacturing
Small Business Size Standard	600 Employees
Product Service Code (PSC)	6655 — Geophysical Instruments

3. Requirement / Salient Characteristics

The Government has a requirement for ultra-precise magnetic field measurement sensors. To be considered capable, the offered product must meet the following minimum salient characteristics:

- **Operating Principle:** Optically pumped magnetometer (OPM) utilizing an atomic vapor cell (e.g., Rubidium or Potassium).
- **Measurement Mode:** Scalar measurement mode (must respond to the absolute magnitude of the magnetic field, rather than just vector components).
- **Sensitivity:** Must achieve a sensitivity better than 1 pT/√Hz (sub-picotesla range).
- **Bandwidth:** Must support a frequency response/bandwidth from DC up to at least 500 Hz.
- **Optical Source:** Must utilize an integrated, low-power laser excitation source (e.g., VCSEL technology).

- **Dimensions:** The sensor head must be highly compact, not exceeding dimensions of approximately 20 mm × 20 mm × 40 mm.
- **Weight:** The sensor head must be ultra-lightweight, weighing no more than 19 grams, to facilitate low-SWaP integration on UAV/UAS platforms.
- **Modularity:** The system must feature a separated or modular Electronic Control Unit (ECU) capable of real-time digital signal processing.
- **Synchronization:** Must be capable of synchronized operation within a multi-sensor array (e.g., precise time-syncing via GPS/GNSS).
- **Orientation (Heading Error):** Must not require precise angular alignment with the Earth's magnetic field to operate effectively.
- **Commercial Availability:** The equipment must be a Commercially Available Off-The-Shelf (COTS) item.

4. Submission Instructions

Interested parties who consider themselves qualified to provide these products are invited to submit a Capability Statement. The Capability Statement must include:

1. **Company Profile:** Company Name, Address, Unique Entity Identifier (UEI), CAGE Code, and Point of Contact (Name, Phone, Email).
2. **Socio-Economic Status:** Indicate business size and any applicable socio-economic categories (e.g., Small Business, 8(a), HUBZone, SDVOSB, WOSB) under NAICS 334519.
3. **Product Capabilities:** Technical specifications, commercial datasheets, or literature demonstrating that your product meets or exceeds the listed salient characteristics.
4. **Manufacturing Status:** Please state whether your company is the Original Equipment Manufacturer (OEM) of the product or an authorized reseller/distributor. If you are a reseller, identify the OEM and state their business size status (to assist with Non-Manufacturer Rule determinations).
5. **BAA Compliance:** Confirmation that the end products comply with the Buy American Act (BAA).

5. Response Deadline

All responses must be submitted electronically via email to Ronald Wilson at ronald.wilson.26@us.af.mil and Wanda Farr at wanda.farr@us.af.mil no later than **10:00 AM MDT on 30 Jun 2026**. Please use the subject line: *"Sources Sought Response FA700026Q0063 — Quantum Scalar Magnetometers"*.

6. Ombudsman

(a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and others for this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman does not affect the authority of the program manager, contracting officer, or source selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of protests or formal contract disputes. The ombudsman may refer the interested party to another official who can resolve the concern.

(b) Before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution. Consulting an ombudsman does not alter or postpone the timelines for any other processes (e.g., agency level bid protests, GAO bid protests, requests for debriefings, employee-employer actions, contests of OMB Circular A-76 competition performance decisions).

(c) If resolution cannot be made by the contracting officer, the interested party may contact the ombudsman, Mr. James Anderson, 8110 Industrial Drive, STE 103, USAFA, CO 80840, Telephone number 719-333-2074, FAX 719-333-9018, Email: james.anderson.72@us.af.mil. Concerns, issues, disagreements, and recommendations that cannot be resolved at the Center/MAJCOM/DRU/SMC ombudsman level, may be brought by the interested party for further consideration to the Air Force ombudsman, Associate Deputy Assistant Secretary (ADAS) (Contracting), SAF/AQC, 1060 Air Force Pentagon, Washington DC 20330-1060, phone number (571) 256-2395, facsimile number (571) 256-2431.

(d) The ombudsman has no authority to render a decision that binds the agency.

(e) Do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the contracting officer.

(End of clause)