# REQUEST FOR INFORMATION (RFI)

This is not a Request for Proposal (RFP), Request for Quotation (RFQ), or an Invitation for Bid (IFB). This is a Sources Sought/Request for Information (RFI) ONLY.

A solicitation is currently not available. This notice is not to be construed as a commitment, implied or otherwise, to issue a solicitation or ultimately award a contract. The purpose of this Sources Sought Notice is to identify potential sources capable of performing the effort described herein pursuant to FAR Part 10, Market Research and FAR Part 19, Small Business Programs. Information received as a result of this notice will be considered market research and used for planning purposes only.

Any information submitted by respondents is strictly voluntary. Any costs incurred as a result of this announcement shall be borne by the responder and will not be charged to BSA for reimbursement.

INTRODUCTION: This is the initial step in the planning process for the Procurement of Ultra-High Vacuum Compatible Hybrid Pixel Detector System for the Booster Polarimeter. Brookhaven Science Associates (BSA) seeks sources with the capability and interest to provide the design, fabrication, testing, and delivery of a complete UHV-compatible hybrid pixel detector system as defined in the Draft Statement of Work (SOW), attached.

BSA anticipates conducting a competitive acquisition for this effort. The North American Industry Classification System (NAICS) code is anticipated to be 334516 - Analytical Laboratory Instrument Manufacturing. The size standard for NAICS code 334516 is 1,000 employees.

INSTRUCTIONS: All interested respondents that are capable of providing this item are invited to respond electronically with a Statement of Capabilities (SOC) demonstrating the ability to meet the requirements outlined in the Draft SOW. Do NOT merely reiterate the objectives or reformulate the requirements specified in the Draft SOW or include any marketing material in the capabilities statement.

Responses shall include company name, address, SAM Unique Entity Identification (UEI) number, point of contact with email address and telephone number, and indicate business size (large, small business, small disadvantaged business, service-disabled veteran-owned small business, economically disadvantaged woman-owned small business, woman-owned small business, or HUBZone) using NAICS 334516, size standard 1,000 employees. BSA reserves the right to consider a small business set-aside for any subsequent acquisition based upon responses to this notice.

**Responses shall address the following areas, at a minimum:**

**1. Commerciality & Market Availability:** Does your firm offer, or is your firm aware of, a commercially available UHV-compatible hybrid pixel detector system (or

[LG1.1][RP1.2]substantially equivalent pixelated detector technology) that can meet the key performance requirements described in the attached Draft SOW? Key requirements include:

* Vacuum compatibility to = 5×10¿¿ mbar

* 300 µm thick silicon sensor

* Simultaneous per-pixel Time-of-Arrival (ToA) and Time-over-Threshold (ToT) readout

* Active area on the order of ~28 mm × 28 mm

* Integration with a ConFlat flange vacuum feedthrough and readout electronics

If yes, please identify the product and describe any modifications that would be required to meet Draft SOW requirements. If no, please identify whether significant custom engineering / non-recurring engineering (NRE) be required.

Does your firm offer any commercially available or near-commercial detector systems that could serve as a viable alternative to the detector system described in the Draft SOW for measuring transverse spin polarization of proton beams in an accelerator environment? If yes, please briefly describe the technology and its suitability or limitations relative to the Draft SOW requirements.

Would your firm be interested in responding to a future Request for Quote (RFQ) or solicitation for this requirement if issued?

**2. Technical Capability & Relevant Experience:** Does your firm have prior experience designing, fabricating, and delivering UHV-compatible pixel or hybrid detectors (or similar scientific detector systems) that have achieved vacuum levels of 10¿8 mbar or better? If yes, please briefly describe the most relevant project(s) and the vacuum level achieved.

Has your firm previously supplied detector systems that were integrated into particle accelerator or beam instrumentation applications? If yes, please provide a brief description and customer references (if permitted).

What is your firm's experience with low-outgassing materials selection, outgassing testing (TML/CVCM per ASTM E595), and bakeout procedures for UHV scientific instrumentation?

**3. Schedule & Commercial Terms:** What is your current estimated lead time from receipt of order to delivery of complete, tested detector systems meeting the key requirements in the Draft SOW? Please note any key long-lead items.

Would your firm be willing to accept a milestone/progress payment schedule tied to deliverables (such as design reviews, vacuum/outgassing testing, and hardware delivery) over an approximately 13–15 month period? If yes, what typical milestone structure would you propose?

If a solicitation is issued, confirm whether your firm can provide pricing inclusive of shipping, applicable tariffs, taxes, and other associated costs. If not, please explain.

Confirm whether your firm would accept FOB shipping terms for domestic shipments and DAP incoterms for international shipments. If not, please identify the shipping terms your firm would propose and explain why FOB or DAP would not be acceptable.

**4. General / Other Useful Information:** Are there any significant technical, manufacturing, regulatory, or export control barriers that would prevent your firm from bidding on or performing this work?

Do you have any suggestions for improving the technical requirements or reducing risk/cost while still meeting the core performance needs for the Booster Polarimeter application?

Please provide a brief company overview, including relevant NAICS codes, SAM Unique Identification (UEI) Number, business size status (small business, etc.), country of origin of end item, and a point of contact for follow-up questions.