

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LYNDON B. JOHNSON SPACE CENTER  
JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION (JOFOC)

Pursuant to 10 U.S.C. 2304(c) (1) and Federal Acquisition Regulation (FAR) 6.302-1

1) **This document is a justification for other than full and open competition prepared by the NASA Lyndon B. Johnson Space Center (JSC):**

2) **The nature and/or description of the action being approved:**

This justification provides the rationale for contracting by other than full and open competition for the acquisition of an electron microprobe.

3) **Description of the supplies or services required, including an estimated value:**

The vendor will supply an electron microprobe that performs in accordance with the specifications. The electron microprobe will be used to examine the solidification of particles and also be used to seek an explanation for trace elements found in moon rock that are thought to be incompatible, all at a micro-level.

The estimated cost for all deliverables is \$1,400,000.

The proposed period of performance is for a 14-month period from authority to proceed.

4) **Statutory authority permitting other than full and open competition:**

The statutory authority for proceeding with this acquisition under Other Than Full and Open Competition is 10 U.S.C. 2304(c)(1) as contemplated by the provision of FAR 6.302-1(a)(2), which states that full and open competition need not be provided when the supplies or services required by the Agency may be deemed to be available from only one or a limited number of responsible sources, and no other type of supplies or services will satisfy agency requirements.

5) **Demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited:**

JEOL USA, Inc. (JEOL) is uniquely qualified to provide these supplies to the Government based on the unique expertise they possess as a result of having the only deliverable device capable of performing to the requirements needed at this time. JEOL's JXA-8530F Automated Electron Microprobe is the only instrument capable of the highly accurate spatial resolution, down to 0.1  $\mu\text{m}$ , needed to observe and analyze elements to the required level. There is no other device capable of the image quality, spatial resolution, and accurate analysis at such micro-levels.

**6) Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable:**

Although JEOL is the only identifiable source to produce these devices, this effort was publicized in FedBizOpps in accordance with FAR Subpart 5.203 on October 11, 2012. The synopsis closed on October 23, 2012.

During that time, no other sources were identified with the skills and capabilities required to perform this effort.

**7) Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted:**

A market survey was conducted for this requirement. A review of trade journals and people knowledgeable in the industry was unable to find a comparable product that is available on the market that can meet NASA's needs.

The automated electron microprobe requested is a very specialized device that has very stringent qualification requirements. To date, no vendor has shown the capability to provide the specifications needed other than JEOL and Cameca Science & Metrology Solutions (Cameca). Although Cameca advertises a device that can fit our needs, it is still in the prototype development stages. It is estimated to be several years before the Cameca product will be available on the commercial market.

NASA issued a synopsis so that any other company that is able to complete the work under the current specifications had an opportunity to address their capabilities.

**8) Other facts supporting the use of other than full and open competition:**

Based on market research, no other company besides JEOL can currently produce the type of microprobe needed for the research stated. Cameca is currently working with a prototype that might be able to meet agency requirements but is not proven and is not available for purchase. JEOL has a proven model that has been tested and can provide a reliable delivery schedule and product.

**9) Sources, if any, that expressed an interest in writing in the acquisition:**

To date, no other sources have expressed an interest in writing in this acquisition other than JEOL.

**10) The actions the Agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required:**

Currently, this is not a reoccurring purchase. It is not anticipated that JSC will purchase this item again for many years. However, barriers to competition for procuring this equipment will be

removed once another source has a commercial product that can meet the specifications required. Once that is complete, competition will be encouraged.