

**JUSTIFICATION FOR OTHER THAN FULL AND OPEN
COMPETITION (JOFOC)
Poly Picosatellite Orbital Deployer (PPOD)
With California Polytechnic State University**

- 1. This document is a justification for other than full and open competition prepared by the NASA Kennedy Space Center.**
- 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 the PPODs for use by the Government in the integration of small (nano, pico) satellite missions in support of NASA strategic goals.

- i. Source:** California Polytechnic State University (CalPoly)
San Luis Obispo, CA 93407
(805) 756-1111
 - ii. Project:** PPOD Manufacture and Integration
 - iii. Special Features:** The PPOD is the only one of its kind in the aerospace industry.
- a. Estimated period of performance is five (5) years.**

- 3. Description of the supplies or services required, include an estimated value:**

The purpose of the PPOD is to integrate three 1U (Unit) or one 3U CubeSat payload carriers into the PPOD. The PPOD Deployer is required to deploy CubeSats.

- a. The task consists of PPOD manufacturing, qualification testing, and integration of the CubeSat Spacecraft (SC).**
 - b. The total estimated cost of this acquisition is approximately \$5,000,000 over the next five years. This dollar value is based on an independent Government estimate developed by Kennedy Space Center technical personnel.**
 - c. The maximum mission estimates are 33 PPODs.**
- 4. Statutory authority permitting other than full and open competition:**

10 U.S.C. 2304 (c) (1) as implemented by FAR 6.302-1, only one responsible source, and no other suppliers will satisfy agency requirements. Because CalPoly is the only manufacturer of the PPOD, there is a reasonable basis to conclude that KSC's minimum needs can only be satisfied by CalPoly. Award to any other source would result in unacceptable delays, risk, and increased costs to the Government.

5. A demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires use of the authority cited:

CalPoly has the unique expertise as the design agency and developer of the PPOD to successfully implement the described tasks. CalPoly generated the design concept for the PPOD, built the PPOD, and performed all of the required strength and failure modes and effects analyses to support the operation of the PPOD. CalPoly has successfully used the PPOD to fly CubeSats on other launch vehicles.

CalPoly has developed and conducted a qualification program on the PPOD for previous missions and expects to perform these qualifications on future vehicles.

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

- a. The requirement was synopsised as a sole source procurement in the FedBizOps on March 13, 2009, and was posted to the NASA Procurement Home page (NAIS) citing the conditions that preclude full and open competition. No responses were received to these announcements.
- b. The Consolidated Contracting Initiative (CCI) database was queried; however, no CCI contract or solicitation was found that covers this requirement, including other agency contracts such as the General Service Administration's schedule contracts.

7. Determination by the Contracting Officer that the anticipated cost to the Government will be fair and reasonable.

The Government will use audited rates from the Department of Health & Human Services (HHS) to determine that costs are fair and reasonable.

8. Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted:

The PPOD that CalPoly developed, built, and tested is the only one of its kind in the aerospace industry. Due to the uniqueness of the PPOD, it is the only existing hardware that can meet the requirements, and CalPoly has unique expertise to perform the manufacture, test, analysis, and integration. CalPoly was determined to be the only organization that could meet the technical and schedule requirements in support of NASA's out-years mission needs. The CalPoly PPOD is a mature design and has flown on several space missions to date. NASA Headquarters PPOD pilot program is in the process of releasing an RFI for the possible selection of CubeSats to fly on upcoming missions. The time it would take to develop and qualify a new CubeSat carrier system would not meet the NASA schedule. The PPOD is the only asset that can satisfy the requirements of this task.

Additional research was performed to identify if any CubeSat deployer system that is currently qualified could meet NASA's carrier requirements. Only three deployers were identified as possible carriers; they are T-POD (Tokyo University), CUTE Separation System (Tokyo Institute of Technology (TITech)) and XPOD (University of Toronto Institute for Aerospace Studies/Space Flight Laboratory (UTIAS/SFL)). Each of these carriers was

evaluated against NASA requirements and each was found to have deficiencies in meeting all the requirements.

This PPOD is becoming the standard for Pico and Nano Satellite development within the industry. The PPOD is being used by the international government agency (ESA) to fly their small satellites on foreign launch vehicles, which demonstrates that the PPOD is the only one of its kind to meet the requirements of the small satellite community.

9. Other facts supporting the use of other than full and open competition:

If this acquisition were pursued using full and open competition, the Government would be impacted by a significant increase to the cost and schedule associated with this effort. The delay incurred by awarding this effort to an organization other than CalPoly would be cost prohibitive. Additional time would also be required for a new vendor to design a system to meet system requirements.

10. A listing of Sources, if any, that expressed an interest in writing in the acquisition:

No other sources expressed an interest in this procurement in writing or otherwise. No inquiries were received.

11. A statement of the actions, if any, the agency may take to remove or overcome any barriers to competition before any subsequent acquisition for the supplies or services required:

The nature of this specific acquisition is such that the requirement must be solicited under other than full and open competition procedures, and the acquisition must remain sole source for the duration of the contract period of performance. Upon completion of this contract, there are no future requirements anticipated. However, for any unanticipated future requirements, the Government will continue to assess the availability of this technology in the industry in order to make every attempt to promote competition.

Justification for Other than Full and Open Competition for
Title of Procurement: Poly Picosatellite Orbital Deployer (PPOD)

Technical Officer: I certify that the supporting data presented in this justification are accurate and complete.



Garrett L. Skrobot
Typed Title

7/31/09
(Date)

Contracting Officer: I certify that this justification is accurate and complete to the best of my knowledge and belief.



Jacklyn L. Norman
Contracting Officer

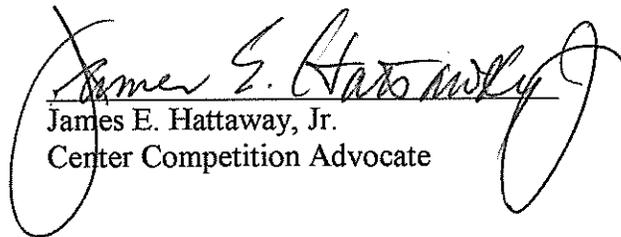
7/31/09
(Date)

CONCURRENCE:

for 
Dudley R. Cannon
Procurement Officer

8/5/09
(Date)

APPROVED:



James E. Hattaway, Jr.
Center Competition Advocate

8/7/09
(Date)