Mississippi State University
Notice of Proposed Sole Source Purchase

256-066

Mississippi State University anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Commodity or commodities to be purchased (make, model, description):

   A kit to build a custom, specialized charged particle tracking detector. It is an instrument that uses a technology called Gas Electron Multiplier (GEM). It includes the following parts that make up the instrument.
   a) XY GEM Read Out board with Panasonic connectors
   b) Unframed GEM foils with 140 micrometers holes
   c) Radiation shielding for the detector
   d) Unframed drift/ionization chamber

2. Explanation of the need to be fulfilled by this item(s), how is it unique from all other options, and why it is the only one that can meet the specific needs of the department:

   This instrument will be used to track charged particles in a particle physics experiment being conducted at the US Department of Energy electron accelerator at Jefferson Lab. This is an experiment funded by the US Department of Energy to measure the charge radius of the proton with ultra-high precision using electron scattering. Given the high rates at which these charged particles are produced, the GEM technology is the only available technology that can be used for this purpose. This technology was invented by CERN (the European Nuclear Physics Lab in Geneva), and they are the sole provider of the kits that can be used to build custom detectors.

3. Name of company/individual selling the item and why that source is the only possible source that can provide the required item(s):

   CERN – The European Organization for Nuclear Science, in Geneva, Switzerland.

They are the lab that invented this technology and the only ones in the world that can produce the GEM foils with the fine mesh of 140 micrometer holes. Many other countries, labs, and commercial entities have tried to reproduce this technology and none have succeeded so far.

4. Estimated cost of item(s) and an explanation why the amount to be expended is considered reasonable:

   The total price of the kit is $14,490. It is similar to the price paid for similar detectors built in the past by our group and many other groups, such as University of Virginia and Stony Brook University.

5. Explanation of the efforts taken by the department to determine this is the only source and the efforts used to obtain the best possible price:

   This is a unique technology with only one Lab in the whole world that can produce the parts needed to build the detector. The lab (CERN) invented the technology, and so far, no other lab/company has been able to make them on their own.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Jennifer Mayfield, CPPO
Director of Procurement Services, Chief Procurement Officer
jmayfield@procurement.msstate.edu
Subject Line must read "Sole Source Objection"

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, MSU determines that the commodity in the proposed sole source request can be provided by another person or entity, then MSU will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If MSU determines after review that there is only one (1) source for the required commodity, then MSU will appeal to the Public Procurement Review Board. MSU will have the burden of proving that the commodity is only provided by one (1) source.