Proposed Sole Source Purchase Form

Pursuant to New Mexico Procurement law, the UNM Purchasing Department will post your completed form on the UNM Sunshine Portal for 30 days prior to purchase of the goods/services.

I. GENERAL INFORMATION. PLEASE PROVIDE THE FOLLOWING:

<table>
<thead>
<tr>
<th>Date of Request</th>
<th>February 17, 2018</th>
<th>Requisition Number (If Applicable)</th>
<th>98769511</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Submitted by</td>
<td>Salvador Portillo</td>
<td>Title</td>
<td>Research Associate Prof.</td>
</tr>
<tr>
<td>Department</td>
<td>Electrical &amp; Computer Engineering</td>
<td>Email</td>
<td><a href="mailto:sportil@unm.edu">sportil@unm.edu</a></td>
</tr>
<tr>
<td>Phone</td>
<td>277-1311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposed Vendor</td>
<td>Kost Ilyenko</td>
<td>Amount</td>
<td>Over $60,000</td>
</tr>
</tbody>
</table>

Provide a basic description of goods/services to be provided:
Drs. Kost Ilyenko and Anatoly Tishenko provide theoretical analysis of advanced crossed field high power sources, to include self magnetically insulated relativistic beams in novel cavity geometries.

Why is this purchase needed?
This technical support of developing new physics understanding of the crossed field devices is a critical need for continuing our sponsored research work supported by NATO.

II. BASIS FOR SOLE SOURCE PROCUREMENT. CHOOSE APPLICABLE BOX(ES) AND PROVIDE ADDITIONAL INFORMATION, AS REQUESTED:

☒ Proprietary item, technology or service only available from the proposed vendor. (Check box and describe proprietary component)

The physics of these devices is complex and very difficult to conceptualize and analyze and it is even more difficult to improve upon modern dynamical models which is what Drs. Tischenko and Ilyenko are doing for this project. Their knowledge based on a cumulative 60+ year experience in understanding and developing these sources is unmatched and critical for continued support by our sponsor.

☐ Compatibility requirement with existing item, technology or service. (Check box and describe compatibility requirement)
Renewal of support/maintenance/subscription of software, technology or other intellectual property. (Check box and describe)

They have extensive experience and unparalleled knowledge of the current state of the research, which is critical to complete the project to our sponsor’s satisfaction.

☐ Other Basis for Sole Source: Please describe below:

III. SUPPLEMENTAL DETAILS. PLEASE PROVIDE ADDITIONAL INFORMATION AS REQUESTED BELOW:

Describe in detail the unique capabilities of the proposed vendor’s goods/service and/or personnel performing the work and why this constitutes the only source. Focus on what is unique about the goods/service and why no other vendor could meet your needs.

As stated above, their 60+ years’ experience in developing, understanding and building these type of devices is unmatched. Their analytical experience and deep rooted knowledge in the physics of charged particle beams make them a critical and irreplaceable component to the success of this sponsored research.
### Describe the due diligence made to locate other possible sources including communications with other universities, communications with similar providers, web searches, yellow page searches, review of advertisements and trade publications, etc.

This is state of the art work selected by our sponsor fully aware of the capabilities of not just Drs. Ilyenko and Tischenko but also of the small community specializing in this work. This includes other research centers and universities and it was chosen by NATO, our sponsored partner, as the best suited to help with this work. Additionally, the community itself, of theoretical physicists working in this small area recognizes them as experts in their field.

### List the other vendors who were contacted. Please describe the specs/qualifications/criteria that the other vendors were unable to satisfy.

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UNM Proposed Sole Source Form – Rev 6/14/13