



S²MARTS Project 21-02a: Spectral Calibration and Noise Characterization Hardware, Methods, and Fixtures

Request For Solutions (RFS) Questions & Answers | Posted February 18, 2021

1. **Question:** What is the space limit for our hardware prototype dimensions?

Response: There is no set space limitation. Generally, field portable (1-2 person carry) is preferred for most applications. Solutions that are simpler, smaller, and lighter are preferred.

2. **Question:** Is there information available (that can be provided) regarding the spectral cameras on-hand at NSWC Crane and is the use of those spectral cameras required in execution of this project?

Response: Infrared cameras include but are not limited to IRC (Infrared Cameras) models 806/812, Surface Optics Corporation models DuoChrome/HSI, and FLIR model 8502. Use of these cameras is preferred.

3. **Question:** Is NIST traceable calibration required for this project?

Response: NIST traceable calibration is required for measurement devices.

4. **Question:** Does the statement "a collaborative partnership with NSWC Crane is key" imply a significant on-site presence is required at NSWC Crane?

Response: The hope is to have a regular working relationship to produce the necessary prototype devices. We anticipate that this process will require our partner to be on base frequently to witness testing and better understand our needs and update/create prototype designs.

5. **Question:** Requesting clarification: Section 5 states "LABVIEW is preferred" and Section 8 states "...solutions must be fully compatible with LABVIEW (current version 2019)".

Response: We prefer that any software be written in LabVIEW. At minimum, it must be compatible with LabVIEW 2019.

6. **Question:** Based on the technical requirement detail, it will be difficult to develop a high confidence fixed price with payable milestone cost/price proposal. Would the Government be willing to entertain an alternative contract type or price response?

Response: Prices and milestones will depend on the proposed solution and available funding at the time. A generalized rough estimate is acceptable for proposal submission. The Government would be

willing to discuss alternate contract types during negotiations although the Government's preference is a FFP arrangement.

7. **Question:** Are the measurements taken during countermeasure functions intended to be analyzed real-time or after all the measurements are taken?

Response: Measurements are intended to be analyzed real-time.

8. **Question:** Are the calibrations intended to take place during operation or during a maintenance cycle?

Response: The calibrations of particular interest are intended to take place during operation.

9. **Question:** Can we receive a temporary license for LabVIEW upon a successfully received award?

Response: The government cannot provide LabVIEW.

10. **Question:** Can we receive a picture or diagram of the current spectral camera setup for the purpose of fixture schematic development?

Response: The setup consists of the camera on a tripod connected to a laptop. There is no special hardware currently in use.

11. **Question:** Do we have a better idea of when to expect documents and when to see this RFP drop?

Response: The RFS is the Government's requirements document. No further documents will be issued or provided.

12. **Question:** The RFS mentions "the potential large scale and long-term nature of this potential projects, (potentially ranging from 3-24 months)..." Is this the intended time frame for our solution schedule? If not, how long is our complete solution schedule permitted to be?

Response: Depending on the proposed solution and amount of funding received, the complete solution could be permitted to take as long as 6 years. However, fixture-type prototypes (such as instrument alignment and general support) will likely need a more rapid response (1-2 months turn around).

13. **Question:** Will we get access to a spectral camera that NSWC Crane uses for our testing? If not, may we have specifications of the camera or be referred where to get access to a similar model?

Response: We will not be able to provide a camera for off-site usage. Any required testing or measurements will need to occur onsite at NSWC Crane. Upon Project award, the cameras may be removed from base for required internal hardware modification, if absolutely necessary.

14. **Question:** Which deliverables do you want first? Prototype fixtures, hardware, software, etc?

Response: Deliverables will depend on the proposed solution. Not all solutions will require all types of deliverables. For example, an alignment fixture is unlikely to require a software component.

15. Question: Are there power, size, and weight limitations for any proposed solutions?

Response: There are no set requirements. Generally, field portable (1-2 person carry) is preferred for most applications. Solutions that are simpler, smaller, and lighter are preferred.

16. Question: What technical expertise level is expected for calibration equipment operation?

Response: Technical expertise is expected to match the proposed solution. For example, fixture design would require expertise in machining and schematic design. If a solution were proposed for a new method of calibration, a high level of technical expertise would be expected.

17. Question: What environment(s) is planned for field operation?

Response: The general operating environment at NSWC Crane is “outdoors” in Indiana (0-100F, full-sun, full-clouds, and humidity). Although testing generally doesn’t occur during heavy rain, equipment may be exposed to rain.