Requirements / Specification Document

Use this document to detail specifications/requirements for an item and/or ancillary services. ⓘ

TITLE: **Wavelength Meter** ⓘ

Requesting Lab/Division/Group: Physical Measurements Lab/Time and Frequency Division/ Ion Storage Group
NB688000-26-02415

General Statement of Need ⓘ

The Time and Frequency division, as part of the Chronos initiative, requires two laser sources and a laser wavemeter to support development of optical clocks based on quantum logic spectroscopy of trapped ions.

Items and/or Ancillary Services ⓘ

Item 1: Laser Wavelength Meter
Quantity: One (1)
Specifications: High precision wavelength meter
1.1 - Input wavelength range: 397 nm – 1120 nm
1.2 – Number of input channels: eight (8) (via external fiber switch)
1.3 - Frequency accuracy: <= 10 MHz
1.4 - Frequency resolution: <= 1 MHz
1.5 - Sampling rate: >= 1 kHz
1.6 - 4-channel PID controller to control laser frequency based on wavemeter measurements
1.7 - Precision < 1 MHz

Separately Priced Options and Services:
Item 2: [List minimum specifications.
Quantity: [Enter quantity here.]
Specifications: [Enter quantity here.]

Item3:

Service Requirements / Item Specifications

Section ⓘ	Requirements/Specifications ⓘ
Planning Considerations ☒ N/A	☐ List any visits required to allow potential vendors to see site specific constraints. [Explain requirement here] ☐ US citizen required on-site (foreign nationals require preregistration 30 days prior) ☐ Vendor rep on-site more than three days ☐ Other considerations: [List other considerations to ensure an accurate quote]
Shipping & Delivery	Delivery in 10 weeks ARO preferred **Shipping criteria:**

☐ N/A	☐ Partial delivery acceptable ☐ Direct delivery to building required [Explain need for requirement here] Building has: ☐ Loading dock ☐ Containerization preference: [Choose container] Other requirements: [List any other requirements here] **Delivery date criteria:** ☒ Delivery of goods, installation, and training shall be completed no later than: Delivery in 16-18 weeks ARO ☐ Deliver no earlier than: [Insert date here] ☐ Other: [List other shipping, delivery, or specil requirements]
Electronic Media ☐ N/A	[Enter electronic media requirements by item here.] ☒ Software ☒ Electronic manuals ☐ License Key ☐ Other: [List any other Electronic Media requirements here] [Enter email address for software delivery here]
Installation ☒ N/A	Vendor installation not necessary ☐ Vendor technician on site ☐ Rigging ☐ Uncrating / Unpackaging ☐ Removal of packaging material ☐ Equipment set up ☐ Start-up services ☐ Turn key installation ☐ Other Click or tap here to enter text. Note: When installation is required, TPOC or COR shall be the coordination point.
Facility / Utility Considerations ☒ N/A	Typical 60 Hz, 120 V power available ☐ OFPM Work Order Number(s) [List any Work Order Number(s) here] ☐ Power available Voltage: [Enter voltage here] (V) Max Current: [Enter max current draw here] (A) Phase: [Choose phase] Frequency: [Typically 60Hz] (Hz) NEMA Plug Type: [Enter plug type here] (i.e.: NEMA L5-20P) Environment: [Choose environment] Other power consideration: [List any other power considerations here] ☐ Utility connections: [List relevant available utilities, pressure(s), and flowrate(s)] ☐ Other considerations: [List other considerations to ensure an accurate quote]

Warranty ⓘ ☐ N/A	Base Manufacturer Warranty is acceptable [If you require an Extended Manufacturer Warranty, describe the warranty requirements per item here.] What is included? ☐ Labor ☐ Parts ☐ Travel ☐ Cost and liability for returns ☐ Other: [Enter other requirements here] ☐ Warranty length: [Enter warranty length here] Period Length:[Ex. month, 6 month, year etc.]
Training ☒ N/A	Minimal training should be required for users of this system beyond the information contained in the user manual ☐ On-site ☐ Off-site location: [Enter location(s) here] ☐ Number of trainees: [Enter number of trainees here] Scope of training: ☐ Operations ☐ Maintenance ☐ Troubleshooting ☐ Safety ☐ Other: [Enter other scope requirements here] ☐ Training materials to be provided: [Describe requirement here] ☐ Other: [Enter other training requirements here] Note: When training is required, TPOC or COR shall be the coordination point.
Inspection and Acceptance ☐ N/A	[Enter inspection requirements per item here] ☒ Planned government acceptance testing (7 business days) ☐ Gov't acceptance expected to take longer than 7 business days: 14 days ☐ Inspection and acceptance plan: [Explain here] ☐ Other: [Enter other requirements here]
Maintenance ⓘ ☒ N/A	[Describe your maintenance requirements per item here] Period Length: [Ex. month, 6 month, year etc.] What is included? ☐ Labor ☐ Spare parts ☐ Consumables ☐ Travel ☐ Cost and liability for returns ☐ Software updates ☐ Manuals ☐ Service plan length: [Enter service plan length here] ☐ Other: [Enter other requirements here] ☐ Requirements: [Enter requirements here] (i.e.: onsite within 72 hours, etc.) ☐ Option Period 1 ☐ Option Period 2 ☐ Option Period 3 ☐ Option Period 4
Government Furnished Material / Equipment ☒ N/A	[List any government furnished material/equipment per item here] ☐ Samples for testing ☐ Government equipment which will leave gov't site (TPOC must coordinate with division property custodian) Serial Number: [Enter Serial Number here] Description: [Enter description here]

	NIST property number: [Enter NIST property number here] ☐ Other: [Enter other details here]
Travel ☒ N/A	[Describe any travel requirements per item here] ☐ Explain: [Explain here] ☐ Other: [Enter other requirements here] *Vendor: To the maximum extent possible, include as part of appropriate sections above (maintenance, repair, etc.). Otherwise, it will be a separate line item, reimbursable per the Federal Travel Regulation.*

Provide suggestions to improve this form by clicking here.