



CSIR - NATIONAL PHYSICAL LABORATORY

(Council of Scientific & Industrial Research)

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No. 14-VII/MPO(3062-)25PB/T-177

Date : 05.03.2026

INVITATION OF EXPRESSION OF INTEREST (EOI)

For the procurement of “ACTIVE HYDROGEN MASER WITH ENVIRONMENT CHAMBER”

CSIR-National Physical Laboratory, New Delhi is one of the earliest national laboratories set up under the Council of Scientific & Industrial Research. CSIR-NPL is the custodian of National Standards and maintains the Indian Standard Time (IST). It is mandated to be India’s National Measurement Institute (NMI) by an act of Parliament. CSIR-NPL disseminates precision measurements that are needed for the growth of Indian science and industry as well as for the legal metrology needs of the nation. Over the years the laboratory has developed expertise in the subject enabling it to shift its basis for measurement standard from ‘artifact’ to quantum standards. The laboratory provides apex level calibration services in the country; offering National Accreditation Board for Testing and Calibration Laboratories (NABL), the national accreditation body in the country.

EOI are hereby invited through Central Public Procurement (CPP) Portal <https://epublishing.gov.in/eprocure> through **OFFLINE HARD COPY** of offers from manufacturers, their authorized distributors and Indian Agent of Foreign principals, if any, under the provision of various policy initiatives and notifications issued by various Ministries / Departments of the Govt. of India for purchase of items listed below:

EOI Ref No.: 14-VII/MPO(3062-GTE)25PB/T-177

Procurement of “Active Hydrogen Maser (AHM) with Environment Chamber”

Last date of submission: 25th March upto 3.00 PM

Date of opening : 27th March, 2025 at 3.00 PM

Interested bidders may download the EOI document/details from our website: www.nplindia.in under link of TENDER/PIC or from **CPP Portal (ePublishing)** website <https://eprocure.gov.in/epublish> under tender ID **2025_CSIR_816143_1** and if you need any technical query may contact through e-mail olaniyamp.nplindia@csir.res.in

Sr. Controller of Stores and Purchase

Subject : Invitation for Expression of Interest (EOI) for the procurement of “ACTIVE HYDROGEN MASER WITH ENVIRONMENT CHAMBER”.

CSIR-National Physical Laboratory, New Delhi has the responsibility of realizing the units of physical measurements based on the International System (SI units) under the subordinate legislations of weights & Measures Act 1956 (reissued in 1988 under the 1976 Act). NPL also has the statutory obligation to realize, establish, maintain, reproduce and update the national standards of measurement & calibration facilities for different parameters. CSIR-NPL is the custodian of National Standards and maintains the Indian Standard Time (IST). It is mandated to be India’s National Measurement Institute (NMI) by an act of Parliament. CSIR-NPL disseminates precision measurements that are needed for the growth of Indian science and industry as well as for the legal metrology needs of the nation. Over the years the laboratory has developed expertise in the subject enabling it to shift its basis for measurement standard from ‘artifact’ to quantum standards. The laboratory provides apex level calibration services in the country; offering National Accreditation Board for Testing and Calibration Laboratories (NABL), the national accreditation body in the country.

Broad Objectives:

EOI are hereby invited from reputed OEM/ authorized manufacturers/ reputed fabricators / companies/ firms for procurement of a state of the art “Active Hydrogen Maser (AHM) with Environment Chamber”. System is required for research purposes & to maintain National primary time Scale.

Eligibility Criteria:

Firms can apply with technical datasheet and/or scheme, along with the documentary evidence for work of similar nature done in the past. The firms should also meet the other required parameters to eligible for participating in the EOI as given below and are required to submit following information along with their applications:

- 1.) Name of the firm with their constitution/proprietorship/partnership details etc., with the date of establishment/registration & Manufacturer’s authorization certificate/OEM authorization to be submitted.
- 2.) List of similar orders successfully completed in the last three years as above with testimonials from department concerned and the details of contact persons, if any.
- 3.) The firm should not have incurred any loss in more than two years during the last five years ending 31st March 2025.
- 4.) Declaration of blacklisting/non-blacklisting by the prospective bidder should be submitted.
- 5.) List of works in hand giving nature of work, department, cost, date of start and completion with present progress and the contact details of clients.
- 6.) Balance sheet of the firm for previous two years (2023-2024 and 2024-2025) must be enclosed with the offer certified by chartered accountant evidencing turnover.
- 7.) The article of association in order to know the standing of the firm.
- 8.) **The EOI will be of “Non-committal” in nature** i.e. keeping in view that after EOI stage and to avoid getting trapped into a legacy technology, if there is any likelihood of further participation by many more bidders, the second stage bidding may not be restricted only to the shortlisted bidders of EOI stage. Thereafter in the second stage, normal OTE/GTE bidding may be done.

Un-priced Offers against this EOI should be submitted to **“The Director, CSIR-NPL, Dr. K.S. Krishnan Marg, New Delhi-110012, Main Building, Room No. 160, Purchase Branch as per the requirement.**

Last date of submission of EOI is 25th March 2026 upto 3.00 PM. Shortlisted eligible firms shall be called for making a presentation at a later date.

If any information furnished by the applicant is found incorrect at a later stage, it shall be liable to be debarred from tendering/taking up of work in CSIR. CSIR-NPL reserves the right to verify the particulars furnished by the applicant; independently. CSIR-NPL reserves the right to reject any prospective application without assigning any reason.

ACTIVE HYDROGEN MASER WITH ENVIRONMENT CHAMBER

Annexure-I

Specifications for Active Hydrogen Maser with Environmental Chamber

Sr. No.	Parameters	Specifications
1.	Frequency Output and Number 5 MHZ (2No.) 10 MHZ (2No.) 100 MHZ (2No.)	5 MHZ (2No.) 10 MHZ (2No.) 100 MHZ (2No.)
2.	Number of Pulse Output 1PPS	1PPS(2No.)
3.	Output 1PPS: Amplitude Pulse width Rise Time	TTL Compatible ≥2.5V, 50 Ohms ≤50 μs ≤5 ns
4.	Frequency Stability (time, s) 1s 100s 10,000s 1,00,000s	Allan deviation (0.5 Hz bandwidth) ≤1.0×10 ⁻¹³ ≤5.0×10 ⁻¹⁵ ≤1.0×10 ⁻¹⁵ ≤1.0×10 ⁻¹⁶

5.	Temperature Sensitivity	≤2.0×10 ⁻¹⁵ /°C	
6.	Magnetic Sensitivity	≤1.0×10 ⁻¹⁴ /Gauss	
7.	Phase Noise (dBc/Hz) 1Hz 10Hz 100Hz	5MHz ≤-125 ≤-145 ≤-150	10MHz ≤-120 ≤-130 ≤-140
8.	Operating Temperature	15-30 ⁰ C	
9.	Power Supply (External)	AC 200-240V at 50Hz and 24-27 V DC	
10.	Environmental Chamber Specifications	Temperature 23 ± 0.2 °C	
11.	Warranty	Three-year warranty	
12.	Software control, Interface, and Manual	a. A complete system with required software with perpetual license for control and monitoring of internal operational parameters and function control via RS-232/USB should be provided. b. This system should support remote access through the network. c. The AHM operational manual needs to be provided in hard and soft copies.	
13.	Calibration/Test Report	The factory acceptance test report/ calibration report should be provided prior to delivery of the item.	