

*Applications are now being accepted for up to two new NIST Precision Measurement Grants with an anticipated award date of **October 1, 2024**. Awards are anticipated to be up to \$50,000 each, per year, renewable for up to two years, for a total of up to \$150,000 per award. Refer to Notice of Funding Opportunity (NOFO) number 2024-NIST-PMGP-01 (available on grants.gov), for official application guidelines and instructions. **April 9, 2024** is the abbreviated application deadline, unless amended in the NOFO.*

National Institute of Standards and Technology

PRECISION MEASUREMENT GRANTS

Background:

Since 1970, the National Institute of Standards and Technology (NIST) has awarded Precision Measurement Grants for significant research in the field of fundamental measurement or the determination of fundamental constants.

NIST sponsors these grants to encourage basic, measurement-related research in universities, colleges, and other research laboratories and to foster contacts between NIST scientists and those researchers who are actively engaged in such work. The Precision Measurement Grants are also intended to make it possible for researchers to pursue new ideas for which other sources of support may be difficult to find.

If funding is available, up to two new grants in the amount of \$50,000 per year will be awarded for the initial period of October 1, 2024 through September 30, 2025. Each award may be continued for up to two additional years at the discretion of NIST based on satisfactory performance, continuing relevance to program objectives, and the availability of funds.

Research topics:

There is some latitude in research topics that will be considered under the Precision Measurement Grants Program.

Proposals will be evaluated based upon the criteria indicated in the NOFO, which includes the relationship of the proposed research to NIST's ongoing effort to develop improved fundamental measurement methods or standards, test the basic laws of physics, or provide an improved value for a fundamental constant.

Typical projects that have been funded through the NIST Precision Measurement Grants Program include:

Precision optical spectroscopy of positronium, S. Chu, **Stanford University**.

Spectroscopy of francium: towards a precise parity nonconservation measurement in a laser trap, L. A. Orozco, **State University of New York at Stony Brook**.

Measurement of Newton's constant G using a new method, J. H. Gundlach, **University of Washington**.

Measurement of the polarization of the cosmic microwave background, S. T. Staggs, **Princeton University**.

Combining the quantum Hall and AC Josephson effects for electric current metrology, E. A. Gwinn, **University of California, Santa Barbara**.

A test of CPT symmetry using a new

K - ^3He self-compensating magnetometer, M. V. Romalis, **Princeton University**

Who may apply:

Eligible applicants include accredited institutions of higher education; non-profit organizations; for-profit organizations incorporated in the United States; state, local, territorial, and Indian tribal governments; foreign public entities; foreign organizations; and Federal agencies with appropriate legal authority. Note that individuals and unincorporated sole proprietors are not considered "non-Federal entities" and are not eligible to apply for this grant.

Application Procedure:

See Section IV of NOFO 2024-NIST-PMGP-01 (accessible at www.grants.gov) for complete application requirements. Applicants for the Precision Measurement Grants Program must first submit an abbreviated proposal for review. Based on the merit of the abbreviated proposal, "finalists" will be selected and invited to submit a full proposal.

The abbreviated proposals of all applicants and the full proposals of selected finalists will be evaluated and ranked based upon the

evaluation criteria in Section V.1. of the NOFO and reprinted below.

Application evaluation criteria:

1. The importance of the proposed research--Reviewers will evaluate: The potential for answering some currently pressing question or for opening up a whole new area of activity.
2. The relationship of the proposed research to NIST's ongoing work--Reviewers will evaluate: Extent to which the proposed research support one of the following efforts at NIST.
 - (a) *Developing a new or improved fundamental measurement method or physical standard;*
 - (b) *Testing the basic laws of physics;* or
 - (c) *Providing an improved value for a fundamental constant.*(See <https://pml.nist.gov>)
3. The feasibility of the research and the potential impact of the grant--Reviewers will evaluate: Likelihood that significant progress can be made in a three-year period with the funds and personnel available, and that the funding will enable work that would otherwise not be done.
4. The qualifications of the applicant--Reviewers will evaluate: Extent to which the applicant's qualifications indicate a high probability that the proposed research will be carried out successfully, based upon:
 - (a) *Principal Investigator's (PI) educational & employment background;* and
 - (b) *Quality of PI's research as reflected in recent publications.*

Each of these factors will be given equal weight in the evaluation process.

Dates:

Applicants must refer to the NOFO for official due dates and Grants.gov black-out dates. Unless amended through www.grants.gov it is anticipated that the abbreviated proposals must be received via email (to pmg@nist.gov) no later than 5:00 p.m. EST, **April 9, 2024** (Tuesday). Proposals received after the deadline will be returned with no further consideration. The finalists will be selected by **May 9, 2024** and will be requested to submit full proposals via grants.gov no later than 11:59 p.m. EST on **July 9, 2024** (Tuesday).

NIST expects to issue awards on or before September 30, 2024.

Applicants are strongly encouraged to start early and not wait until the approaching due date to review instructions in the NOFO and submit an application. Applications received after the deadline will not be reviewed or considered.

NOFO 2024-NIST-PMGP-01 is the official competition document. Nothing in this leaflet is intended to conflict with or supersede the NOFO in any way. Any perceived conflict between this leaflet and the NOFO must be resolved in favor of the NOFO.

NIST and Grants.gov contacts are listed in Section VII of the NOFO.

Programmatic and technical questions may be directed to Joseph Tan, via email at joseph.tan@nist.gov.

Web: www.grants.gov and www.physics.nist.gov/pmg

NIST
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