Cover Section *(1 page by itself)*

**MRI Type**: *Acquisition or Development*

**Title**: *Insert Brief Title*

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| --- | --- | --- | --- |
| **Name** | **Proposal Role[[1]](#footnote-1)** | **Institution/Department** | **Project Role or Activities**  |
| Doe, Jane | PI | UM; Dept. of XXX | *list activities involved and role on those* |
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Project Summary*(1 page by itself, including Overview, Intellectual Merit, and Broader Impacts)*

Overview Statement:
*(per instructions in the solicitation and the NSF PAPPG. Describe the activity that would result if the project is funded, including objectives and methods. Who/what/where/how?)*

Enter your text here….

Intellectual Merit Statement**:**

*(per instructions in the solicitation and the NSF Grant Proposal Development Guide What is the instrument’s potential to (enable research that will) advance scientific knowledge? Focus on the science that the instrument will make possible.)*

Enter your text here….

Broader Impacts Statement**:**

*(per instructions in the solicitation and the NSF Grant Proposal Development Guide. What is the potential of the instrument’s acquisition, development, and lifespan to benefit society of advance societal outcomes? How will the instrument create a substantial improvement in the organization’s ability to conduct leading-edge research, provide research experiences of graduate/undergraduate research using leading-edge capabilities, and broaden participation in STEM by underrepresented groups? Extent of anticipated shared use?)*

Enter your text here….

Abbreviated Project Description *(5 to 10 pages).*

### a) Information about the Proposal

#### a1) Instrument Location and Type

Your text here….

#### a2) Helium Use

*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL.
Answer this question: Is this request for include the purchase, installation, operation, and maintenance of equipment and instrumentation to reduce consumption of helium.?
YES or NO. If YES, discuss how this instrument will reduce consumption of helium.*

*Will this instrument use any helium?
YES or NO. If YES, discuss whether (and how) steps will be taken to conserve and/or recover and reuse helium.
DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. )*

Your text here….

a3) Justification for submission as Development proposal (if applicable).
*(only required for Development proposals; not needed for acquisition proposals).*

*DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL What significant new capabilities, not available from an instrument provided by a vendor, will the new instrument provide? How will the end result of the effort be a stable shared-use instrument, rather than technology development, a device, a product, or a technique/protocol? Does the instrument development effort build capacity for such activities in an MRI submission-eligible organization(s)? In what way does the instrument development require design work that must be undertaken or has been undertaken in-house, rather than through published designs in the literature? In what ways does the instrument development require/benefit from a team of scientists/engineers/technicians that bring a variety of skills to the project? For what activities does the instrument development require a significant number of person-hours, more so than simple "assembly" of purchased parts? Does the instrument development require timeframes for completion that are longer than are required for plug-and-play or assembled instruments? Does the instrument development require the use of a machine shop or a testbed to fabricate/test unique components? Does the development effort have potential risks in achieving the required specifications, and hence requires a risk mitigation plan? DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL)*

Your text here….

### b. Research Activities to be Enabled

*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. To what degree is the planned research is exciting, ground-breaking, or transformative; briefly describe up to 6 specific research project(s), grouped into themes, and research training activities that will be enabled and that drive the need for the instrumentation [including any preliminary data that these projects may have already generated (or simulated) on an alternative instrument if applicable and if that will help make your case], and the current and potential funding sources (NSF and other) that may support these activities and/or how the instrument will better enable future funding support—this should be for the most active regular users of the instrument. In a table, list any additional (including minor or less frequent) anticipated users of the instrument, by research area and type (e.g., senior personnel, postdoctoral fellows, graduate students, undergraduate students). {Development proposals should identify specific users who intend to use the instrument once it has been deployed, and the specific uses to which they will put it.} DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL)*

Your text here….

### c. Description of the Research Instrument Needs

*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. For an ACQUISITION, provide a brief description of the requested instrumentation, including manufacturer and model number where appropriate; include description of related instrumentation currently available at or near (or virtually available to) UM. For DEVELOPMENT of new instrumentation, briefly present the design concept, rationale, and development methods. For development proposals, the rationale for the new instrument, the design concept, and the development strategy and methods in sufficient detail to allow for the evaluation of its technical feasibility. Reviewers must be able to evaluate the expected capabilities of the instrument upon completion, and its likely availability for shared use at the end of the award period. If applicable, provide appropriate preliminary results from existing equipment, or appropriate calculations and/or models to indicate the added utility or enhanced performance (e.g., reliability, sensitivity, capacity, stability, resolution, or signal-to-noise ratio) to be achieved by the new instrument. Justify the necessity and adequacy of the new instrumentation for the proposed research projects, with reference to instruments that are currently available. DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL)*

Your text here….

### d. Broader Impacts, including Impact on Research and Training Infrastructure

*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. This section should provide a discussion of the broader impacts as a result of the acquisition or development of the instrument, including a description of how the instrument will serve to attract researchers and make a substantial improvement in the institution's capabilities to conduct leading-edge research. If appropriate, describe how the instrument will improve the quality of research training. Any proposal requesting direct student support in maintenance or development efforts must justify that involvement in terms of both project needs and the training of the next generation of instrumentalists (reviewers will be asked to evaluate the appropriateness of this type of involvement). Proposals should also address whether, and if so how well, the instrument will broaden the participation in science and engineering research by women, underrepresented minorities and persons with disabilities. Proposals requesting over $1.4 million (Track 2) should address the potential impact of the instrument on the research community of interest at the regional or national level. For large multi-user instruments that enable usage beyond a single institution, concrete plans for enabling access by external users (including those from non-Ph.D. and/or minority-serving institutions) through physical or virtual access should be presented, and the uniqueness of the requested instrument should also be described****.*** *DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL)*

Your text here…..

e. Management Plan
*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. For all proposals: Description of space/facility where instrument will be housed. Who will operate and maintain the instrument over its lifetime, and how? What will the technical expertise needed and cost for maintaining the instrument? is that expertise currently in place? If not, how will it be obtained? What procedures for allocating instrument time, and for attracting and supporting new users? Will a charge center be established? If so, provide any preliminary description and calculations of how that might work. (It is recommended that those considering establishing a charge center contact Beth Stidham, Manager of Sponsored Programs Accounting, early in the planning process to explore how this might work, and potentially reference this in your pre-proposal: estidham@olemiss.edu).*

*If this is a Track 1 or Track 2 proposal: Will the instrument require the use of helium? Yes or No. If Yes, describe plans to describe plans for the conservation and/or recovery and reuse of helium for this instrument (not involving the submission of a separate Track 3 proposal. DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL).*

*For DEVELOPMENT proposals: info about the management of the design, construction, and commissioning phases, including required personnel and anticipated costs of each phase. Assessment of risks. Plans for making the instrument readily available for other researchers. See solicitation.*

Your text here….

## Budget, Justification, and Funding

(1 page or less. ESTIMATE and briefly justify the anticipated project costs.  *Show how budget items are justifiable and eligible costs. Show that at least 70% of the Total Project Cost budget can be included under the Equipment Category. All budget items, including those for maintenance in acquisition proposals and personnel support in development proposals must be well-justified in the Budget Justification and commensurate with the scale and complexity of the instrument and/or development effort. The budget justification must explain the basis of the cost estimates, consistent with their allowability under the MRI solicitation. Inclusion of voluntary committed cost sharing is prohibited.*

Your text here….

Results from Previous NSF MRI Submission
*(DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. 1 page or less. If this is a resubmission of a previous MRI proposal submitted to NSF, summarize scores and reviewer comments received, and describe how you are addressing those comments in this proposal to improve competitiveness. Attach the actual NSF panel summary you received from (at least) the most recent unsuccessful submission to NSF—this will not account against your page limit for this pre-proposal. DELETE THIS ITALICIZED TEXT BEFORE SUBMITTING YOUR PRE-PROPOSAL. ).*

Your text here….

1. Proposal Roles: PI (one); Co-PI (up to four); Senior Personnel (unlimited); Student; Post-Doc; Other [↑](#footnote-ref-1)