

If you have taught at GSI at Green Bank within the past four years, complete only the personal information and education sections of the application and get a recommendation of Sue Ann Heatherly.

**2023 WEST VIRGINIA GOVERNOR'S STEM INSTITUTE AT Green Bank
Faculty Application**

PERSONAL INFORMATION

Name:

E-Mail Address:

Mailing Address:

Telephone Number:

EDUCATION AND EXPERIENCE

Degree(s)

**Provide information for the type of degree you obtained and the school where it was received. If you do not hold a degree listed, write N/A.*

Bachelor's Degree:

Master's Degree:

Doctoral Degree:

Teaching Certification(s):

Experience

**Provide information about any teaching experience you have below. List your current teaching position, and the classes you teach or have taught in the past. Current college students may list student teaching experiences, but indicate that the position was as a student teaching position and not a position as a full-time employee.*

Current Teaching Position

Math/Science/Technology Courses Currently Teaching or Have Taught:

Have you ever taught at Governor's STEM Institute (GSI) or Governor's Honors Academy (GHA)? If so, list the year(s).

List any other teaching experience(s) that you feel has helped strengthen your ability to teach the kinds of students you will work with at GSI. Continue on next page.

REFERENCES

**Provide the names and contact information for two professionals who will write your recommendations OR a recommendation from Sue Ann Heatherly.*

NAME:

E-MAIL:

PHONE NUMBER:

NAME

E-MAIL:

PHONE NUMBER:

The Green Bank Observatory GSI will engage faculty in leading STEM Explorations related to the central theme of astronomy research which will incorporate computational thinking, engineering and astronomical data analysis. Additionally, faculty will be deeply engaged in mentoring a team of student researchers in their research projects. A brief description of the program can be found below.

Please describe your philosophy regarding inquiry-based teaching and strategies you will employ to mentor a student team toward a successful research experience, while fostering individual independence and student collaboration.

IMPORTANT NOTE!

This application must be submitted via e-mail to sheather@nrao.edu, jennifer.l.gill@k12.wv.us, and ray.lowther@k12.wv.us. Please read the information below to

get an idea of what this year's Green Bank Observatory program will look like.

If you have any questions, feel free to e-mail the Green Bank Observatory GSI director Sue Ann Heatherly sheather@nrao.edu, 304-456-2209

2023 WEST VIRGINIA GOVERNOR'S STEM INSTITUTE Green Bank Observatory Information for Applicants

Tentative Dates: July 2-15; (staff arrive on July 1)

Employment Details

Although we plan to have an in-person academy in 2022, all applicants must be willing and be able to teach remotely, utilizing techniques for engaging students, interactive teaching and learning, large-and-small group presentations, and activities to promote community building.

FACULTY SALARY: \$350/day = \$4,900.00

GSI-Green Bank will consist of a two-week residential program for 60 rising ninth-graders (30 males and 30 females). The GSI-Green Bank program consists of several components: a central research theme of radio astronomy research, foundation talks, STEM Explorations, and enrichment activities. Below is a summary of the activities students will experience. All staff— faculty and undergraduate mentors— may be engaged in all of these activities to varying degrees.

Central Research Theme: Radio Astronomy

The central theme for GSI-Green Bank is radio astronomy research with extensive, supporting exposure to advanced topics in science, computing, engineering, and mathematics. For two weeks, students will be immersed in the research activities of this national research center. They work in teams of 5 to 6 students led by a teacher and supported by a student mentor and a GBO staff scientist.

At the conclusion of the GSI, the student research groups present their findings to each other, GSI staff, and GBO scientists, and guests in a formal academic colloquium that reinforces the need for ongoing research and exploration. Foundations Sessions. Core concepts students can use in their research such as how astronomers analyze the electromagnetic radiation they receive at their telescopes, as well as content related to the research projects will be addressed through a combination of lectures and activities. For example, students might participate in guided experiments with optical spectra to learn how and why celestial objects emit light and radio waves and they hear from practicing scientists about how research is done and how data is analyzed.

STEM Explorations. GSI-Green Bank will enhance the central research team with supplemental educational activities called STEM Explorations, which are virtual investigative small group experiences conducted in 20-student groups in sessions over three-day periods. These sessions will introduce students to the careers that make up the Observatory beyond astronomy such as engineering, machining, and computer science. Explorations complement the primary research theme of radio astronomy and provide students with information that may assist them in understanding their research project.

Enrichment Seminars and Whole Group Activities. During many afternoons and evenings, GSI staff will offer a variety of enrichment experiences including guest lectures, virtual field trips, and other activities that broaden students' understanding of the role of scientific research in society and provides opportunities for students to learn a new skill or develop a new hobby.