



# Boyce Astro's Intro to Radio Astronomy



## Explore the Invisible Universe with Radio Astronomy!

*From Radio Waves to Discovery*

Investigate the Invisible Universe  
Using Real Observations from  
the Boyce-Astro Radio Telescope (BART)

**Analyze the 21-cm Hydrogen Line**  
Discover how astronomers map neutral hydrogen throughout the Milky Way.

**Work with Real BART Data**  
Analyze authentic observations collected by the Boyce-Astro Radio Telescope.

**No Coding Experience Required**  
Use an instructor-provided analysis tool to explore real astronomical data.

**Fully Online & Self-Paced**  
Learn on your schedule anytime, anywhere.

**Authentic Research Capstone**  
Investigate real observations, interpret your results, and present your scientific findings.

**No Telescope Required**  
All observations are provided from the Boyce-Astro Radio Telescope (BART).

**Designed for Curious  
High School & College Students**

| Fall 2026 Seminar Schedule Office Hours are at 7:00 PM and are recorded. |           |                                                            |
|--------------------------------------------------------------------------|-----------|------------------------------------------------------------|
| Module                                                                   | Date      | Topic                                                      |
| 0                                                                        | 5-Oct     | Orientation                                                |
| 1                                                                        | 9-Oct     | Introduction to Radio Astronomy                            |
| 2                                                                        | 16-Oct    | Waves, Signals, and the Science of Detection               |
| 3                                                                        | 23-Oct    | Building and Using a Radio Telescope                       |
| 4                                                                        | 30-Oct    | The Radio Sky                                              |
| 5                                                                        | 6-Nov     | The Hydrogen Line (21 cm)                                  |
| 6                                                                        | 13-Nov    | The Invisible Universe – Beyond Visible Light              |
| 7                                                                        | 20-Nov    | Interferometry and High-Resolution Imaging                 |
| 8                                                                        | 4-Dec     | Modern Radio Observatories & the Future of Radio Astronomy |
| 9                                                                        | 11-Dec    | Interpreting Real Radio Telescope Data                     |
| 10                                                                       | by 18-Dec | Capstone Presentation                                      |

**Learn more at our website:** [www.boyce-astro.org](http://www.boyce-astro.org)  
Questions ? Email [brief.shared@gmail.com](mailto:brief.shared@gmail.com)

There is a \$49 fee due before Module 1. Class size is limited to 12. Preference will be given to graduates of other Boyce-Astro seminars, followed by those having the highest score on the IntroSTARS™ final quiz.

**To apply and be invited to the Zoom Orientation, please get on our Wait List — [Click Here](#)**