

## Membership Information

Annual SARA dues Individual \$20, Classroom \$20, Student \$5 (US funds) anywhere in the world. Membership includes a subscription to Radio Astronomy, the bimonthly Journal of The Society of Amateur Radio Astronomers, delivered electronically (via a secure web link, emailed to you as each new issue is posted). We regret that printing and postage costs prevent SARA from providing hardcopy subscriptions to our Journal.

We would appreciate the following information included with your check or money order, made payable to SARA:

Name: \_\_\_\_\_  
Email Address : \_\_\_\_\_  
(required for electronic Journal delivery)  
Ham call sign: \_\_\_\_\_ (if applicable)  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Zip: \_\_\_\_\_  
Country: \_\_\_\_\_  
Phone: \_\_\_\_\_

Please include a note of your interests. Send your application for membership, along with your remittance, to our Treasurer.

For further information, see our website at:

<http://radio-astronomy.org/membership>

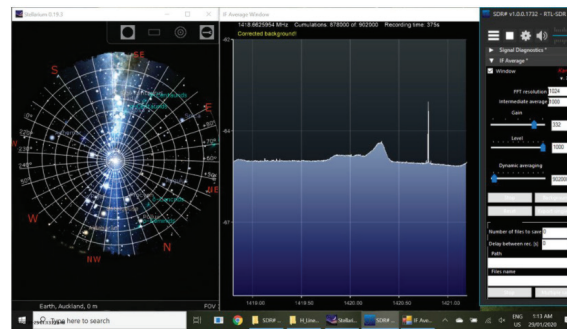


**Society of Amateur  
Radio Astronomers, Inc.**  
Founded 1981

Membership supported, nonprofit [501(c) (3)]  
Educational and Radio Astronomy Organization  
**Knowledge through Common Research,  
Education and Mentoring**

## How to get started?

SARA has made a kit of software and parts to detect the Hydrogen line signal from space. This is an excellent method to get started in radio astronomy. It teaches the principles of antenna design, signal detection, and signal processing. Read more about this and other projects on our web site.



Hydrogen Line Peak (ignore the Narrowband Peak) Pointing at (-110°, 0°) Galactic Coordinates



SARA members have been privileged to use this forty foot diameter drift-scan hydrogen line radio telescope every year at their annual meeting in Green Bank.



<http://radio-astronomy.org>

## Why Radio Astronomy?

Because about sixty five percent of our current knowledge of the universe has stemmed from radio astronomy alone. The discovery of quasars, pulsars, black holes, the 3K background from the "Big Bang" and the discovery of biochemical hydrogen/carbon molecules are all the result of professional radio astronomy.

## The Society of Amateur Radio Astronomers

SARA was founded in 1981, with the purpose of educating those interested in pursuing amateur radio astronomy.

The society is open to all, wishing to participate with others, worldwide.

**SARA** members have many interests, some are as follows:

### SARA Areas of Study and Research:

- ✓ Solar Radio Astronomy
- ✓ Galactic Radio Astronomy
- ✓ Meteor Detection
- ✓ Jupiter
- ✓ SETI
- ✓ Gamma Ray/High Energy Pulse
- ✓ Detection
- ✓ Antennas
- ✓ Design of Hardware / Software

The members of the society offer a friendly mentor atmosphere. All questions and inquiries are answered in a constructive manner. No question is silly!

**SARA** offers its members an electronic bi-monthly journal entitled Radio Astronomy. Within the journal, members report on their research and observations. In addition, members receive updates on the professional radio astronomy community and, society news.

Once a year SARA meets for a three-day conference at the Green Bank Observatory in Green Bank West Va.

There is also a spring conference held at various cities in the Western USA. Previous meeting have been at the VLA in Socorro, NM and at Stanford University.



### How do I get started?

Just as a long journey begins with the first step, the project you elect must start with a clear idea of your objectives. Do you wish to study the sun? Jupiter? Make meteor counts? Do you wish to engage in imaging radio astronomy? What you decide will not only determine the type of equipment you will need, but also the local radio spectrum.

### How do amateurs do radio astronomy?

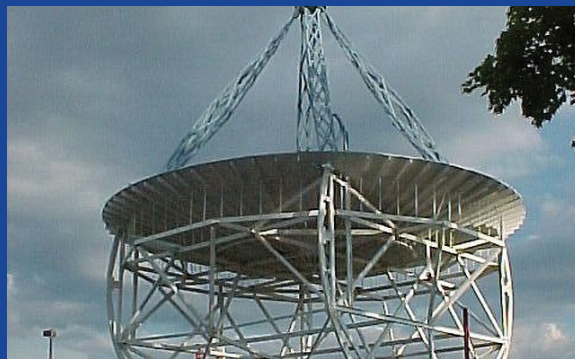
Radio astronomy by amateurs is conducted using antennas of various shapes and sizes, from smaller parabolic dishes to simple wire antennas. These antennas are connected to receivers and most of these receivers are software defined radios these days. Data from the receivers are collected by computers, and the received signals will be displayed as charts, graphs or maybe even sky maps. As diverse as the observed objects, so is are the instruments and tools used. SARA members will always be supportive to find good solutions for what one wishes to observe.

### Is amateur radio astronomy instrumentation expensive?

Technical information freely circulated in our monthly journal helps amateurs to obtain good low noise equipment from off the shelf assemblies, or to build their own units. The actual cash investment in radio astronomy equipment need not exceed that of any other hobby.

### What are amateurs actually looking for in the received data?

The aim of the radio amateur is to find something new and unusual. Just as an amateur optical observer hopes to notice a supernova or a new comet, so does an amateur radio observer hope to notice a new radio source, or one whose radiation has changed appreciably.



The Reber Telescope at NRAO. Constructed by Grote Reber in 1937 in his back yard in Wheaton, Illinois



SARA Members discussing the IBT (Itty Bitty Telescope)

