

amateur radio observer hope to notice a new radio source, or one whose radiation has changed appreciably.

What does the average amateur radio telescope consist of?

In general, the amateur radio telescope consists of a good antenna system, a sensitive, stable, low noise receiver, and various output devices. The output may take the form of a strip chart recorder, a voltmeter or a data logging computer.

Several good starting places.

NASA Radio JOVE. Radio JOVE students and amateur scientists observe and analyze natural radio emissions of Jupiter, the Sun, and our galaxy. <http://radiojove.gsfc.nasa.gov/>

NASA Inspire. Exploring very low frequency natural radio emissions.
<http://image.gsfc.nasa.gov/poetry/inspire/>

Stanford University space weather monitor program is an education project to build and distribute inexpensive ionospheric monitors to students around the world.
<http://solar-center.stanford.edu/SID/>



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.

Membership Information

Annual SARA dues are only \$20 (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/>**

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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



2008 SARA Conference at NARO

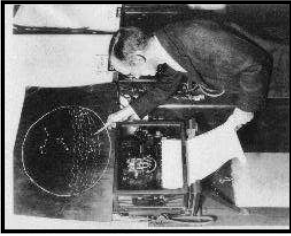
Thank you for your interest in the **Society of Amateur Radio Astronomers**. This organization was founded in 1981, with the purpose of educating those interested in pursuing amateur radio astronomy. The society is open to all, wishing to participate with others, worldwide.

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

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Karl Jansky. The discoverer of cosmic radio waves, May, 1933.

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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 bimonthly journal entitled **Radio Astronomy**. Within the journal, members report on their research and observations. In addition, members receive updates on



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

gional meetings in other parts of North America and abroad, catering to those who cannot attend the yearly conference. Also, members offer their speaking services to groups and organizations wanting to learn about radio astronomy and **SARA**.

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



SARA Members discussing the IBT (itty Bitty Telescope)

the professional radio astronomy community and society news.

Once a year, **SARA** meets for a three-day conference at the National Radio Astronomy Observatory, located in Green Bank, West Virginia, USA.

In addition, **SARA** members host re-

the type of equipment you will need, but also the local radio spectrum.

How do amateurs do radio astronomy?

Radio astronomy may be conducted using either imaging or non-imaging techniques. Non-imaging radio astronomy includes the observation of radio noises from Jupiter, collection of solar flare data, and meteor infall counts. Non-imaging radio astronomy is conducted with very low cost receiving equipment and relatively simple antenna systems. It usually involves modified communications type receivers which receive a narrow band of radio frequencies.

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.

Is SARA an organization of only professionals?

At our annual seminars, academic titles are disregarded and everyone is on a first name basis. Many of our members have become good friends through their common interest.

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