



National Radio
Astronomy
Observatory



**West Virginia's
Space Place**

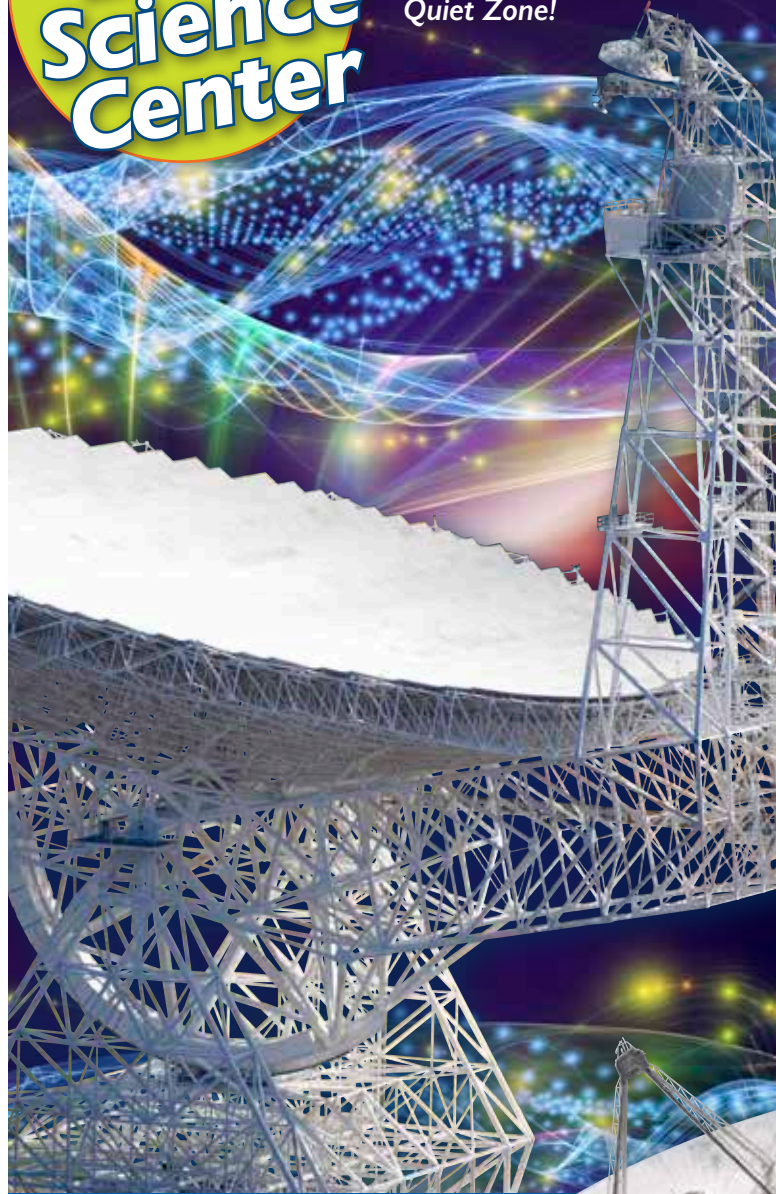


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National Radio Astronomy Observatory

Green Bank Science Center

Visit our gigantic telescopes and hands-on astronomy exhibits in the heart of the National Radio Quiet Zone!



West Virginia's Space Place

304-456-2150

Check out the Green Bank Science Center Facebook page for events and specials, and take a look at www.nrao.edu/VisitGB



Top 10 things to do!



1 Project Breakthrough Listen

Learn about the most exciting and comprehensive search for Extraterrestrial life! A new tour even guides you through the historical search for life and takes you into restricted telescope facilities.*

4 Catch the Wave Exhibit Hall

Free! Discover how radio astronomers learn about the universe!

4



*Find out pricing, scheduling and how to participate in the schedule and event sections. Breakthrough Listen Tour and High Tech Tours require reservations 48 hours in advance, screening and have limited availability. Call 304-456-2150 for details!

5 Behind-the-Scenes High Tech Tour

Visit telescope control rooms and engineering labs normally off limits to the public!*



3 Galaxy Gift Shop

Out-of-This-World science and astronomy toys and gifts, logo apparel and WV artisan souvenirs.



2 Telescope Tours

How do I get up close to the GBT? What is a radio wave? Tour the fascinating world of radio astronomy and see the pioneering instruments of the 1950's to the world's premier single-dish telescope, the GBT! Includes science demonstrations and bus excursion into the RFI-restricted Zone 1. This hour-long, family friendly tour takes you up-close to the world's biggest telescopes. It's the most popular way to explore the site and is offered year round!

GBT Fast Facts

- Day and night, rain or shine, the GBT works to observe fundamental physics, star formation and evolution, cosmic chemistry and the origins of life and galaxies.
- Despite its weight, the GBT can be pointed with an accuracy of one arcsecond. That's equivalent to the width of a human hair seen from 66 feet (20m) away.
- It weighs 17 million lbs (7.7 million kg) - as much as 20 fully loaded Boeing 747s.
- The GBT is the World's Largest Steerable Telescope and has a surface that could hold 2 whole football fields!
- The telescope is designed to handle a great range of wave-lengths from 9ft (3m) long down to 1/8th inch (3mm).
- The telescope only receives signals from space, never sends them.
- The telescope is 485ft (148m) tall - taller than the Statue of Liberty and nearly as tall as the Washington Monument.



Star Parties!

Once a month, we roll out the optical telescopes for a dark sky viewing!*



8 Explore the grounds

Stretch your legs, bring a bike or walk the dog! How far is Neptune from the Sun? Find out for yourself as you walk through our Solar System Model and discover radio astronomy along the way.



Stay a Spell!

Come see what Nature's Mountain Playground offers. Pocahontas County is nestled in state and national parks-see trains, telescopes, live music and more! The historic steam engine excursion train at Cass is just 10 minutes away and Snowshoe Mountain Resort is just 30 minutes away.
www.pocahontascountywv.com

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Star Lab Friday!

Every Friday, we roll out the stars! Gather under our planetarium balloon for a fascinating constellation tour. Offered every Friday at 2pm, this family-friendly event is limited to 15 participants. Reserve your spot early, this tour sells out fast at \$3pp for a 1 hour program!

Starlight Café

Fresh Salads, Burgers and Wraps! Dine with a view of the GBT or enjoy a fun family picnic outdoors!



Organized Group Tours

Motor Coach groups are welcome. Tours can be scheduled any day of the week. For your convenience, and to guarantee a guided tour, please make advance reservations. A \$3 fee per person is required for motor coach tours. Group meals also available.

School and scout groups are welcome. Tours can be scheduled any day of the week. We can tailor a program to your group. Tour reservations are free for organized school and scout groups, advance arrangements are required. See event calendar for new Boy Scout Weekend opportunities!

Informal groups are welcome. If your group is traveling by car, we will incorporate your group into the regularly scheduled public tours. If you have a group of 20 or more people, we appreciate knowing in advance.

For additional group details and reservations, contact the Green Bank NRAO tour director by calling (304) 456-2150 or email gbt-tours@nrao.edu.



Plan your trip!

Please note:
Our hours change seasonally. Plan your trip carefully in order to maximize your experience.



High Tech Thursdays

Offered on Select Thursdays Year-round at 3:30pm; \$15/person. Dates below.

Advanced reservations strictly required at least 48 hours before the tour. 15 participants max. No photography.

A special tour through telescope control rooms and engineering labs normally off-limits to the public. Federal regulations require pre-screening attendees age 18 and up.

Call 304-456-2150 or email gbt-tours@nrao.edu for reservations. For more on our screening policy visit: <https://public.nrao.edu/screening>.

Tour dates: 1/14, 2/11, 3/10, 4/14, 5/12, 6/9, 6/23, 7/14, 7/28, 8/11, 8/25, 9/8, 9/22, 10/13, 10/27, 11/10, 12/8



Telescope Tours

Jan 2 – May 25

Tours at 11am, 1pm and 3pm. Closed Tuesday & Wednesday

May 26 – Sept 6

Tours hourly from 9am-6pm Every Day

Sept 7 – Oct 31

Tours Hourly from 9am-6pm. Closed Tuesday & Wednesday

Nov 1 – May 25, 2017

Tours at 11am, 1pm and 3pm. Closed Tuesday & Wednesday

Adults - \$6/person; Seniors - \$5/person

Children 10 & under – Free

Active Service Personnel and Veterans – Free

Offered Year Round; Reservations required for groups of 20 or more. Call 304-456-2150 or email gbt-tours@nrao.edu for reservations.

Tour the fascinating world of radio astronomy and see the pioneering instruments of the 1950's to the world's premier single-dish telescope, the GBT!

Featuring science demonstrations and even a bus excursion through our gates into the RFI-restricted Zone 1, the hour-long telescope tour takes you up-close to the world's biggest telescopes. This family friendly tour is our most popular offering!



Monthly Star Party

(Rain or Shine)

Meet at the Science Center

5pm Party

3/12, 4/9, 11/12,

12/3, 1/21/17

8pm Party

5/14, 6/11, 7/9, 8/6,

9/24, 10/22,

NRAO staff will treat you to views of the night sky through optical telescopes. If it rains, don't worry. You are invited to a stellar presentation.



Family Science Labs

2/6, 4/16, 7/9,
9/11*, 11/12
10am - Noon

Free for everyone. Reservations appreciated.

NRAO staff guide kids of all ages through fun-filled, hands-on science projects. We provide all materials. Each lab highlights a different science/engineering theme.

***Don't miss our Family Science Day Open House Festival on 9/11!**



SETI Tours



Offered on Select Fridays Year-Round from 1 - 3:30 pm; \$40/person. Dates below.

Advance reservations and screening strictly required at least 48 hours prior to tour. 20 participants max., 4 min.; Ages 12 & up. Hard hats and light refreshments provided. Also offered as Group Reservation on request-limited availability, 4 participants minimum.

Our new SETI Tour celebrates Green Bank's historic Search for Extra Terrestrial Intelligence. The tour begins with an exclusive presentation right in the control room of our historic 85-1 Telescope where the search began with Frank Drake's OZMA project. From there, guests enjoy rare admittance inside the 140-foot telescope where Jill Tartar's Project Phoenix took place and then to normally-restricted GBT access points. The tour ends in our Drake Lounge where you will be greeted by one of our own NRAO astronomers and learn about the future of SETI as the GBT embarks on the new Project Breakthrough Listen. If you've ever wanted to be inside our operation control rooms or to speak to one of our radio astronomers in person, then this is THE opportunity of a lifetime!

Tour dates: 5/27, 6/3, 6/17, 7/1, 7/15, 7/29, 8/12, 8/26, 9/9, 9/23, 10/7, 10/21

Email gbt-tours@nrao.edu or
Call **304-456-2150** for reservations.
Visit <https://public.nrao.edu/screening>
for more on our screening policy.



Star Lab Fridays

Every Friday at 2:00 pm
\$3 per person; reservations
recommended.

Guests will gather under a planetarium balloon for a fascinating look at the night sky. Space is limited to 15 participants per program. Program lasts approximately 1 hour.



Check out the Green Bank Science Center Facebook page for updated events and specials, and visit www.nrao.edu/VisitGB. Call 304-456-2150 for reservations.

Dates subject to change without notice.

Save the Date!

Riders Get Ready!

Join us for a weekend-long cycling festival, where experts will guide you in fun mountain and road rides. Whether you are an experienced mountain biker or complete novice, there will be rides, races and cycling clinics for all ages and levels. The Rumpus also features star parties, bonfires, on-site camping and live music both nights!

Early Registration Discounts!

Find out more information at www.gb.nrao.edu/rumpus



Space Race Rumpus • June 10-12

Join the Largest Optical & Radio Star Party in the Nation!

Enjoy optical and radio astronomy presentations, hands-on workshops and dark West Virginia skies. Learn to use a radio telescope! Fun activities for children too! The Green Bank Star Quest is sponsored by the Central Appalachian Astronomy Club.

For more information visit www.greenbankstarquest.org

Star Quest • July 6-9



Create your own event!

Educational Field Trips!

Free tours, activities, and day and overnight field trips for organized groups of K-16 students, Boy & Girl Scouts and clubs. Overnight students experience science first hand by completing research projects with a real radio telescope. More than just a tour, a trip to NRAO might just inspire your students to join the next generation of scientists and engineers. Registration required.

public.nrao.edu/look-deeper/field-trips



Merit Badge Weekends!

Earn your Astronomy or Electronics Merit Badge using a real radio telescope! Free tours and activities for scout troops. Our site is convenient to other popular scout stops such as Seneca Rocks, Snowshoe, Cass Railroad, the Durbin Rocket and Buckskin Boy Scout Camp. Spots fill up fast! Weekends include: Feb 26-27, Mar 11-13, Apr 29-May 1, Sep 23-25, Dec 2-3 and Jan 20-22, 2017.

Make your reservation today!
Email gbt-tours@nrao.edu





Green Bank Open House & Family Science Day

Where else can you... build and launch a rocket, test your engineering skills, play with liquid nitrogen, do fun science experiments, safely view the sun, and see some of the biggest telescopes in the whole world ALL IN ONE DAY? Public site tours will be available as well as rare peeks into the control room of the world's largest fully-steerable telescope!



Free Event!
No reservations required.

Open House • September 11

Green Bank Turkey Trot

Race starts at 1pm. Registration required.

Eat too much? You'll enjoy your punkin' pie a whole lot more if you run or walk the annual 5K/10K Green Bank Turkey Trot. The annual race affords spectacular views of some of the world's largest telescopes.

Registration is required!

More information at
www.gb.nrao.edu/turkeytrot



Turkey Trot • Nov 26

Who's hungry?

The Starlight Cafe offers wraps and deli sandwiches, salads, hot dogs & burgers, nachos & soft pretzels, soft-serve ice cream treats and an assortment of snack foods.

Take advantage of our special menu and pricing for groups of 20 or more! Contact our cafe manager for more information.

Starlight Cafe is open:

Winter & Spring Hours: Thurs - Mon 11am - 6pm,

Summer Hours: Daily 11am - 7pm

Fall Hours: Thurs - Mon 11am - 7pm

Stop in for a bite!



We'll come to you!

Request a college ambassador from our West Virginia Space Public Outreach Team (SPOT) to visit your school or group and deliver standards-based slideshows and hands-on activities. Presentation titles include: "How to Make a Planet... with Life!", "The Star of Our Universe" and "The Invisible Universe: Radio Waves, Gravity Waves and the Green Bank Telescope".

Request a presentation and activities at public.nrao.edu/spot today!



Dates and events subject to change.

Visit www.nrao.edu/VisitGB for updates.

For event reservations call: 304-456-2150



Visit the Green Bank Telescope

National Radio Astronomy Observatory

Science Center & Tour Hours

Jan 2 – May 26, 2016

Open Thursday-Monday; ** 10am - 6pm
Telescope Tours at 11am, 1pm and 3pm

May 27 – Sept 5, 2016

Open Daily; 8:30am - 7pm
Telescope Tours Hourly 9am - 6pm

Sept 6 – Oct 31, 2016

Open Thursday-Monday; ** 8:30am - 7pm
Telescope Tours Hourly 9am - 6pm

Nov 1, 2016 – May 25, 2017

Open Thursday-Monday; ** 10am - 6pm
Telescope Tours at 11am, 1pm and 3pm

Closed: 3/27 for Easter Holiday
11/22 – 11/25 for Thanksgiving Holiday
12/24 – 12/26 for Christmas Holiday
1/1 – 1/2 for New Year's Holiday

**Closed Tuesday and Wednesday

General Admission to the Science Center is FREE!

Telescope Tour Rates

General Pass (Ages 11-64)	\$6.00
Senior Pass (65 & Up)	\$5.00
Children (10 & Under)	Free
Veterans and Active Service Members	Free

HOURS SUBJECT TO CHANGE.

In inclement weather, please call ahead at 304-456-2150.



NRAO Green Bank Science Center

155 Observatory Road
Green Bank, WV 24944

GPS coordinates
38d-25'-48.2"N
79d-49'-03.93"W

Only 30 minutes to Snowshoe and only 10 minutes to Cass!



Welcome to the Quiet Zone! The Green Bank Science Center is at the heart of the National Radio Quiet Zone, a 13,000 square mile region of minimized radio signal interference designated by the U.S. Government in 1958 to create a safe haven for radio astronomy. *Please plan to turn off your cell phone and other wireless devices when you arrive and enjoy interruption-free exploration! To learn more, visit <http://go.nrao.edu/nrqz>.



The National Radio Astronomy Observatory Green Bank is located in Pocahontas County on Route 92/28 about 25 miles north of Marlington, 53 miles south of Elkins, and 65 miles west of Staunton, VA.