



Green Bank Observatory Communications

Jill Malusky, Public Relations Specialist



greenbankobservatory.org

COVID-19 Update: Observatory operations and closures. [Learn More](#)



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Ask Green Bank Observatory

"Is anyone available to chat?" Ask

"I have a question. Can you help?" Ask

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ABOUT GREEN BANK OBSERVATORY

Our Story

The universe is whispering to us. Radio astronomy science center & research facility located in Gree...

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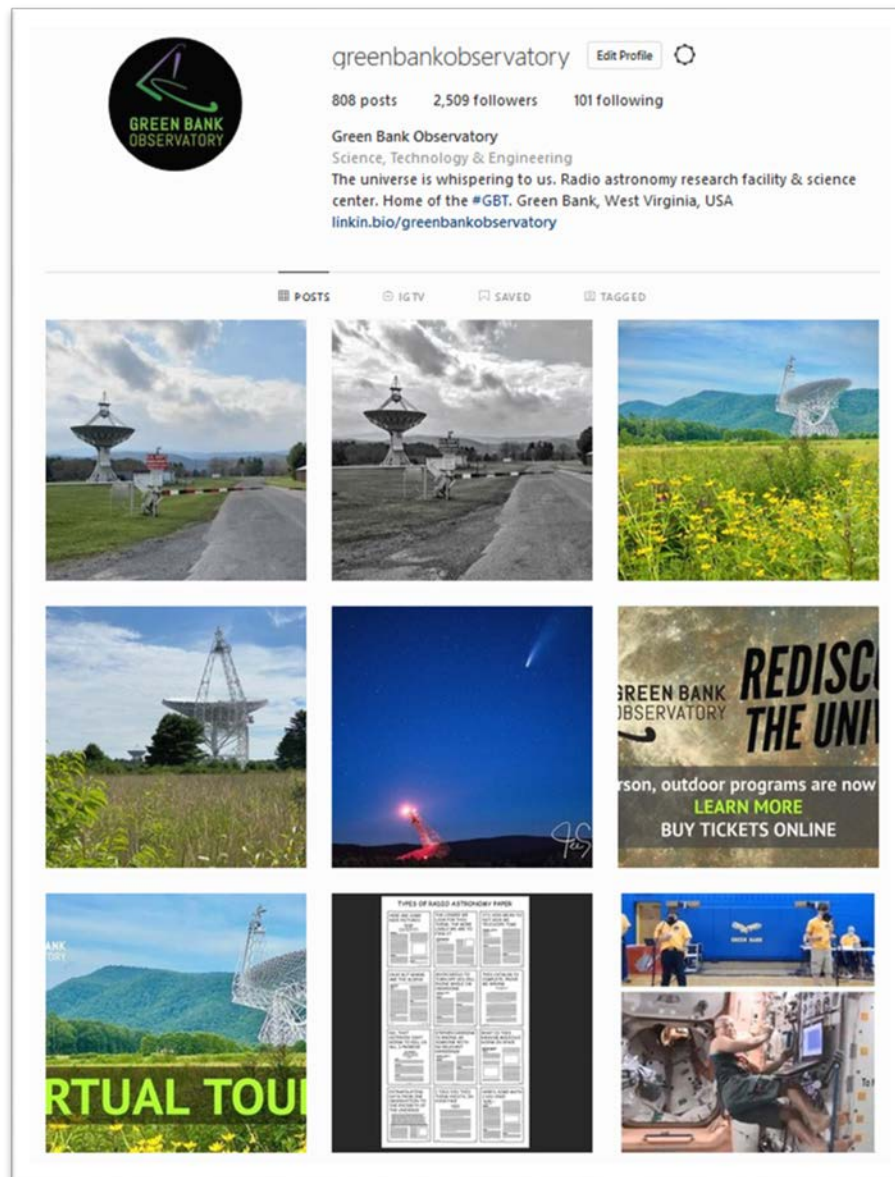
LEARN STELLARIUM WITH LUCI!

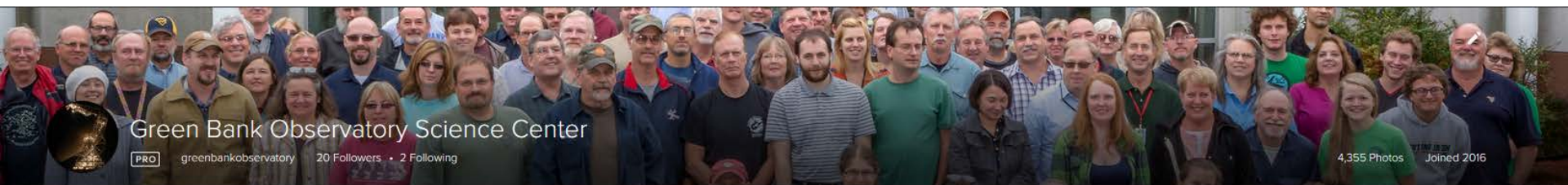
June constellations & myths

JUN 11 Learn Stellarium with Luci! June's Ni... Today at 1:30 PM Get Reminder

Photos

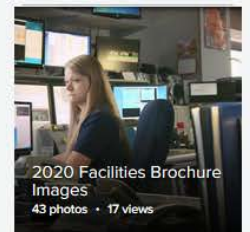
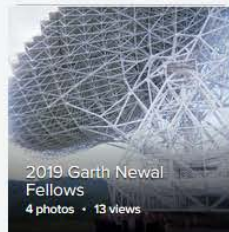
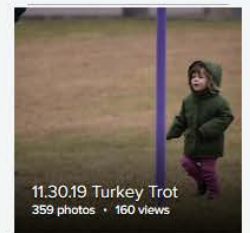
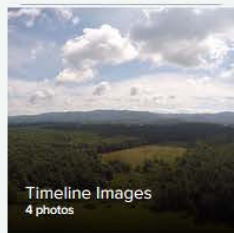






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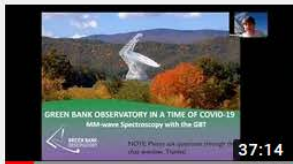


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3-21-20 Green Bank Observatory Update,...

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Celebrate Earth Day with "The Lorax" storytime

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Can you find the Milky Way

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


Prevent Light Pollution


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Updates: COVID-19 related [operations and closures](#)


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About the Green Bank Observatory

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Mission Statement

Green Bank Observatory enables leading edge research at radio wavelengths by offering telescope, facility and advanced instrumentation access to the astronomy community as well as to other basic and applied research communities. With radio astronomy as its foundation, the Green Bank Observatory is a world leader in advancing research, innovation, and education.

Our Facility

The first trailblazers of American radio astronomy called Green Bank Observatory home over 60 years ago. Today, their legacy is alive and well. Nestled in the mountain ranges and farmland of West Virginia, within the National Quiet Zone, radio astronomers are listening to the remote whispers of the universe, in order to discover answers to our most astounding astronomical questions.

[Download a PDF of our 2021 Green Bank Observatory booklet.](#)



Green Bank Observatory booklet

- Annual publication
- Distributed to scientific community, education, business, etc.

NEWS


BLOWING IN THE WIND: FAST MOLECULAR CLOUDS DISCOVERED STREAMING OUT FROM THE GALACTIC CENTER

The GBT was part of an international study that discovered carbon monoxide molecules in the Milky Way's nuclear wind. Most large galaxies like the Milky Way have hot fast winds blowing from their centers, but only in the Milky Way can be studied up close and in detail. This finding gives new information on the mass flow and energetics of the wind, and on its origin and fate.



LIVE VIDEO UPDATES

The Observatory has been sharing the latest news on operations and scientific research through live, bi-weekly video meetings. Recordings are archived and accessible through the Observatory website and YouTube channel. Invitations are sent to the Observatory science e-mail list and social media.



GBT USES CYCLIC SPECTROSCOPY TO CREATE WORLD'S FIRST REAL-TIME ULTRA-WIDEBAND PULSAR OBSERVATIONS

The GBT is a premier tool for studying pulsars, thanks to its sensitivity. A new \$1.3 million award from the National Science Foundation will develop a powerful new system for capturing these observations in real-time, combining pulsar observations and cyclic spectroscopy in the ultra-wideband. The Green Bank Observatory is the first in the world to combine all of these aspects at once, in one robust observation processing system, in real-time.



Image credit: W. Lee (JBT), Data from Radio Astronomy (JBT)

GBT DATA A PART OF BREAKTHROUGH LISTEN'S MOST COMPREHENSIVE SEARCH TO DATE

Independent team combines existing radio telescope data with new catalogs to search over 200 times more stars than before.



NEW TELESCOPE WILL IMPROVE LOCALIZATION OF FAST RADIO BURSTS

West Virginia University recently announced that a \$1.7 million National Science Foundation grant will be used to construct a new telescope at the Observatory. This new instrument will be used in association with the Canadian Hydrogen Intensity Mapping Experiment, or CHIME, which is located half a continent away in British Columbia, Canada, studying Fast Radio Bursts, or FRBs. The new instrument at GBT will work with the existing CHIME telescope to triangulate the location of these mysterious bursts.



MORE THAN MEETS THE EYE: COMPLETE IMAGING OF CLUSTER COLLISION


This composite image of a giant cosmic collision was created by an international team of astronomers using radio, X-ray, and optical data collected with the MUSTANG-2 receiver on the GBT, the European Space Agency's (ESA) XMM-Newton Satellite, and the National Astronomical Observatory of Japan's (NAOJ) Subaru Telescope in Hawaii. The dazzling colors reveal a dramatic temperature increase resulting from the collision-induced shock – a rise from 40-million°C in the overall body of the cluster, to a whopping 400-million°C.



Image credit: R. Subramanian, Chandra X-ray Telescope, National Astronomical Observatory of Japan; M. L. L. et al., European Space Agency; National Science Foundation; Green Bank Observatory; Green Bank Telescope; European Space Agency; NASA; NASA/ESA; X-ray observation.

THE FUTURE OF MULTI-MESSENGER ASTRONOMY IS IN THE OBSERVATORY'S NEW DATA ARCHIVE

Thanks to funding from the National Science Foundation, the Observatory will begin construction of a new data archive in 2021. This new project will allow archival data collected from GBT observations to be more easily accessed by the greater astronomy community. Multi-Messenger Astrophysics will be able to conduct historical and time-constrained searches for variable and transient phenomenon, while large pulsar surveys can be re-processed to yield newly discovered millisecond pulsars that are critical for the study of gravitational waves.





2021 GREEN BANK OBSERVATORY

SEE MORE NEWS greenbankobservatory.org/news

PUBLICATIONS See our extensive list of recent and past papers greenbankobservatory.org/science/publications

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Visit

In response to the health concerns posed by COVID-19, the Green Bank Observatory Science Center is closed and several public programs and events are postponed.

Programs and events affected have been removed from our Events calendar and notifications have been added to specific program and event web pages.

Take a self guided walking tour of the site. [Download a map here.](#)





SELF-GUIDED WALKING TOUR & SITE MAP

The Self-guided walking tour may be taken anytime before dark. Visitors are welcome to walk their dogs or ride bicycles around the grounds. We request that once you pass the gate, shown in red with a star (★), be certain that all electronics not vital to your health are completely turned off.

Telescopes - both active and inactive - are marked in purple letters. Points of interest are marked in green numbers. The best location to take pictures of the Green Bank Telescope is our Observation Deck, indicated by a triangle (▲), near the parking lot behind the Jansky Lab (5).

A scale model of the solar system begins with the Sun in front of the Jansky Lab (5) and ends 1.5 miles away at Pluto, next to the Green Bank Telescope (I). This Scale model is 1 foot to 3 billion feet. The kiosk at the Sun flag provides more information.

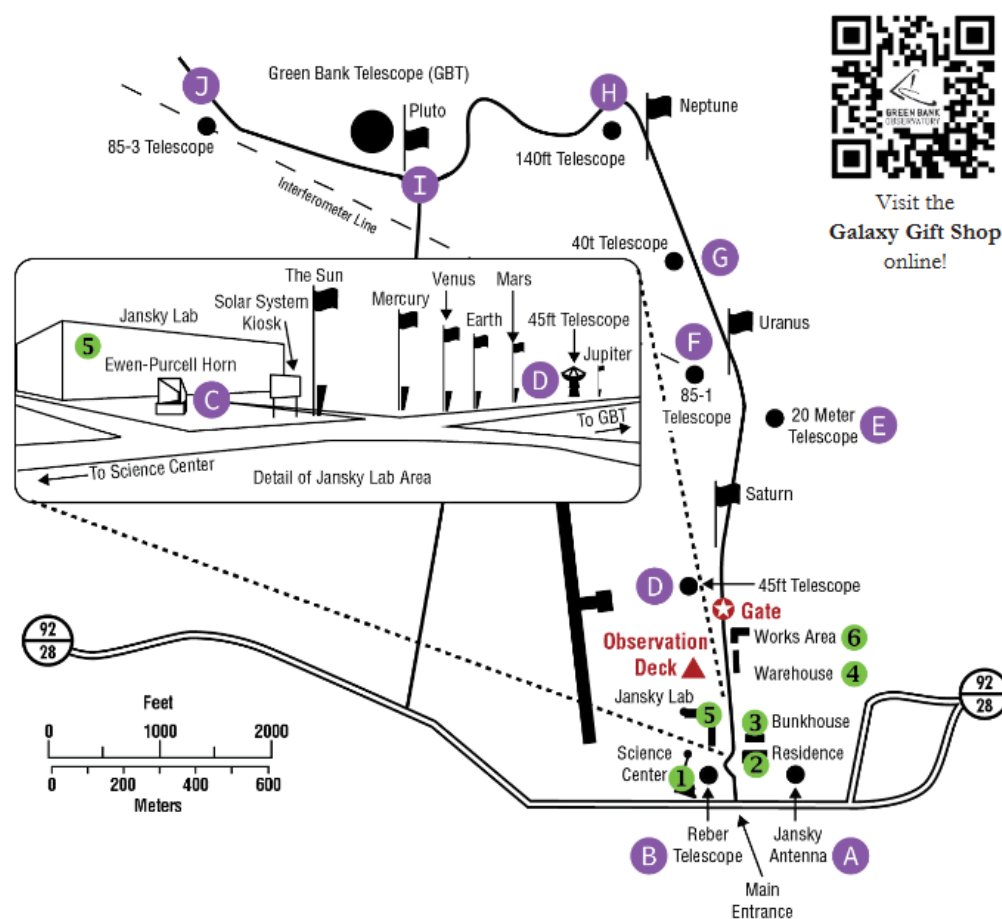
The Green Bank Science Center (1) is open year-round and serves over 45,000 visitors a year. The 25,000 square foot facility contains the Catching the Wave Exhibit Hall, a 150-seat auditorium, classrooms, a gift shop, and a full menu at the Starlight Café.



Green Bank has two short-term housing buildings. The Residence Hall (2) is used for visiting scientists, while the Bunk House (3) is often used for students participating in educational programs. Part of the Warehouse (4) was our original tour center, but now hosts Observatory and community events.



Sensitive receivers and state-of-the-art data collection systems are invented and designed in the Jansky Lab (5). The parts are fabricated and assembled in the Works Area (6) before being transported to the telescopes for use.





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#GreenBankTelescope

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Press Releases

- Published papers using GBT data
- Project announcements
- AAS presentations

How long is a day on Venus? Scientists crack mysteries of our closest neighbor

Posted on 2021-04-30 at 8:22 am.

Written by Jill Malusky



Fundamentals such as how many hours are in a Venusian day provide critical data for understanding the divergent histories of Venus and Earth, UCLA researchers say. Credit: NASA/JPL-Caltech

Venus is an enigma. It's the planet next door and yet reveals little about itself. An opaque blanket of clouds smothers a harsh landscape pelted by acid rain and baked at temperatures that can liquify lead.

Now, new observations from the safety of Earth are lifting the veil on some of Venus' most basic properties. By repeatedly bouncing radar off the planet's surface over the last 15 years, a UCLA-led team has pinned down the precise length of a day on Venus, the tilt of its axis and the size of its core. The findings are published today in the journal *Nature Astronomy*.



Recent Posts

- How long is a day on Venus? Scientists crack mysteries of our closest neighbor
- New astronomical survey utilizes the Green Bank Telescope to give clearest view of ionized gas in the Milky Way
- West Virginia Students Contact International Space Station LIVE
- Observatory staff lead new sustainability initiatives
- Spring & Summer Outdoor Programs are Now Open
- Can Green Bank Telescope Defend Against Asteroid Apophis?
- NASA's Mars Perseverance rover landing observed by the Green Bank Telescope
- NASA Mars Rover Touches Down, Green Bank Telescope Receives Signal
- Mars Rover Phones Home, Green Bank Telescope Answers
- Staff volunteer in county wide road clean-up

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Information for requests by the press for interviews, photography, film, and other resources

Guidelines for the use of Green Bank Observatory media and communications follow:

Public Photography

Press Requests

Media Use

Social Media Policy

The scientific work performed at Green Bank Observatory limits the use of electronic devices onsite, including digital cameras and smartphones. Film and photography created by the general public is encouraged and welcome in public areas including the Science Center, outdoor area surrounding the Science Center, and the telescope observation deck. Please be aware of warnings and signs directing you to turn off (or leave electronic devices in your vehicle) in all other areas on site. If you are participating in an educational program during your visit, Green Bank Observatory staff will direct you where photography is safe and permitted.





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