

## National Radio Astronomy Observatory and Green Bank Observatory Photography and Filming Policy

The National Radio Astronomy Observatory (NRAO) and the Green Bank Observatory (GBO) use some of the most unique and valuable astronomy facilities on Earth to study the Universe.

These include:

- Karl G. Jansky [Very Large Array](#) (VLA) in Datil, New Mexico
- [Very Large Baseline Array](#) (VLBA) with antennas located in ten sites across the U.S.
- Robert C. Byrd [Green Bank Telescope](#) (GBT) and Green Bank Observatory (GBO) in Green Bank, West Virginia
- [Central Development Laboratory](#) (CDL) in Charlottesville, Virginia
- Domenici Socorro Operations Center (DSOC) in Socorro, New Mexico
- National Radio Quiet Zone (NRQZ)
- National Radio Dynamic Zone (NRDZ) *currently in development*
- [next generation Very Large Array](#) (ngVLA) *currently in development*
- [Atacama Large Millimeter/submillimeter Array](#) (ALMA) *requests are passed on to the Joint ALMA Observatory (JAO)*

**The scientific operations at our facilities often require radio silence.**

*What does this mean?*

The use of electronic equipment for photography and film can interfere with our science.

All media visits, and film and photography on location, require careful planning and must be coordinated with **NRAO/GBO News & Public Information**.

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### **APPLICATION PROCEDURE for NRAO/GBO News & Public Information**

Visitors are welcome to take photos and videos of publicly accessible areas during regular, open hours of operation at our sites.

Any photography or film created by a professional entity, or created by anyone (amateur or professional) from areas not authorized for general public access or outside the hours authorized for general public access must apply for permission and pay fees as necessary, based on the specifications of the location requested and the photography/film project.

### **DEFINITIONS**

In this document, the term crew includes all paid or volunteer staff, and any other persons recruited or employed by the person, company, or entity executing an agreement with NRAO/GBO.

Production or Production Company includes the company or entity responsible for the photography/film production/shoot.

Photography and filming include all digital and analog image and sound recording and broadcasting activities.

Observatory, NRAO, and GBO mean the National Radio Astronomy Observatory and the Green Bank Observatory.

## **APPLICATION**

### **1. Select a Point of Contact for the production.**

The production company will designate a single Point of Contact (POC) for the application process and planning for the shoot. This person will be the main POC for Observatory staff and responsible for coordinating all production activities throughout their respective organization and those employed for the shoot. This person's full legal name, title, cell phone number, and email must be provided to NRAO prior to any activity on NRAO property. If the POC is unable to provide the necessary coordination and communication, the Observatory reserves the right to cancel the request/shoot.

### **2. Planning with NRAO News & Public Information staff.**

The POC will meet with the NRAO News & Public Information Manager to discuss the request. The POC will provide a general overview of the project including information about the production company, samples of previous photography and film projects, the storyline, distribution/outlets, crew size, equipment to be used, and proposed shooting dates. The News & Public Information Manager will provide direct feedback on the request to evaluate its feasibility. This information will be used for processing the request. If it is approved, then an agreement and fee schedule will be drafted by NRAO staff.

### **3. Provide technical specifications for all equipment.**

Provide complete technical information, as described below, under "Rules and Procedures," about all electronic equipment to be used for production. If necessary, provide specific equipment for testing. To prevent radio interference that can disrupt the Observatory's operations and severely damage sensitive equipment, only equipment approved by NRAO may be brought to our facilities.

### **4. Scheduling.**

It is recommended that requests for photography and filming be made as far in advance as possible, as the approval and planning process requires the coordination of several departments. At an absolute minimum, requests, applications, and reservations must be made at least two weeks in advance. It is necessary to be flexible in your production dates, as your request will be coordinated alongside ongoing scientific projects.

Many of our NRAO facilities are located in remote areas, so additional time must be planned for travel, accommodations, services, and resources your production will need.

**5. Provide certificate of insurance.**

Provide the certificate of insurance as described below, under "Rules and Procedures."

**6. Pay all Fees.**

To reserve production dates, a deposit of 20 percent of the total production fee is required. This deposit is not refundable.

Production fees will provide compensation for access to the site, interruptions to observations or maintenance, and costs associated with NRAO staff coordinating, preparing for, and escorting the production.

The remainder of the total production fee is payable prior to the start of any production activity.

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**OBSERVATORY RULES AND PROCEDURES**

These may vary depending on location/site. Please see addendums for site-specific information.

**Priority**

Scientific observing has absolute priority over photography and filming. NRAO will not permit photography or filming that competes with or disrupts Observatory programs, displaces or interferes with Observatory activities or maintenance, or imposes an unreasonable burden on Observatory staff or facilities.

**Radio Interference**

NRAO and GBO instruments are some of the world's most sensitive radio receiving systems. In order to perform our scientific mission, our instruments must be able to receive and process extremely faint radio waves coming from objects in space. Our instruments are vulnerable to harmful interference from numerous types of common electronic equipment. This includes equipment that intentionally transmits radio signals and also equipment that unintentionally or incidentally radiates radio signals.

Intentional radiators include cellular phones, tablets, smartwatches, laptops, two-way radios, digital cameras, wireless microphones, vehicles, or any device that uses WiFi, Bluetooth, or any other wireless communication system.

Unintentional radiators include some electronic devices such as electric fans, hair dryers, power generators, microwaves, etc. Any device that incorporates a microprocessor can potentially cause harmful interference to a radio telescope.

Producers must provide a complete list with the make and model number of all electronic equipment that they propose to use in their shoot.

This information will be reviewed by NRAO engineers. It may be necessary for the production company to provide specific equipment in advance of photography/filming for testing. Only equipment approved by NRAO may be used. It may be necessary to impose limitations on the use of some equipment, such as limiting the hours of usage or restricting usage to certain distances from instruments. Radio emissions will be monitored by NRAO staff, and any equipment found to be causing interference must be turned off immediately and its use discontinued.

Because of these restrictions, some productions may be possible only during limited periods of time when NRAO instruments are not performing astronomical observations, or if the production company has paid appropriate fees to interrupt/halt regular observing.

### **Safety**

Film crews must obey all NRAO safety rules and regulations. A conference with the NRAO Safety Officer may be required prior to the start of filming.

Where the film company's and NRAO's safety rules conflict, the more stringent rules will apply.

Hardhat protection is required within 100 feet of an antenna or while on an antenna. In other areas, additional protection, such as for eyes and ears, may be required.

All filming equipment shall be set up in a manner that does not create safety hazards. Film crews must ensure that the placement of such equipment does not result in tripping hazards, fire hazards, blocked exits, or other safety concerns. All equipment and machinery must be used in accordance with approved safety procedures. Cones, caution tape, outdoor wire protection, cable covers/speed ramps, or other devices must be used wherever needed to restrict access in dangerous areas.

No aspect or procedure of the production may generate hazardous waste. Creation of hazardous waste will result in immediate cancellation of the production, with no refund of any fees.

Smoking and vaping is prohibited in all indoor areas on NRAO property.

### **Storyline Approval**

The production company must provide information about the storyline and the types of scenes to be filmed at the NRAO or GBO facility, and how the organization and facility will be portrayed in the production.

The script or storyboards must be reviewed in advance of approval of the production, by NRAO and GBO News & Public Information staff and Observatory leadership. U.S. National Science Foundation (NSF) members may also require review and approval if the production fees are \$100,000 or above.

The production cannot misrepresent NSF or the Observatory, its mission, or its personnel in a harmful, fraudulent, or degrading way or that portrays the Observatory in a negative manner.

The production cannot in any way imply the endorsement of NRAO, NSF, or the U.S. Government of any product or service.

Photography and filming requests can be rejected on the basis of the above considerations, or on grounds relating to the nature or content of the production. The decision of the Observatory about the appropriateness of any production will be final. The Observatory shall have the right to review in advance and approve all advertising, promotional, or marketing materials that use the Observatory's name, symbols, identifiable buildings or landmarks, logos, or other trademarks or images.

### **Content**

When possible, content created by the production should share assets with the Observatory for educational, promotional, and archival use. This will be negotiated based on the details of the project, including its storyline and intended use.

Observatory staff retain the right to document the project with photography and video for educational, promotional, and archival use. Materials will not be shared until the release of the project. Observatory staff will coordinate with producers to prevent early release, leaking, or “spoilers”.

### **Credit**

The production company must note/credit the Observatory location, to include:

Site specific name (ex. Karl G. Jansky Very Large Array)  
National Radio Astronomy Observatory and/or Green Bank Observatory  
Associated Universities, Inc.  
U.S. National Science Foundation

### **Site Access during Production**

Site access is non-exclusive to the film crew. NRAO staff will conduct normal activities during filming and will exercise any access required for maintenance or emergency purposes.

Unless otherwise negotiated, regular public/visitor access will remain open for regular hours of operation.

Unless otherwise negotiated, staff will continue their work as usual on site for regular hours of operation.

Site access after regular hours of operation must be negotiated and scheduled, fees will be charged accordingly.

Overnight accommodation varies by site. Please see notes about specific locations.

### **Non-disclosure Agreements**

Observatory staff may not sign non-disclosure agreements, except under very limited circumstances that must be reviewed and approved by NRAO management in advance.

Release forms may be signed only by designated Observatory officers, and must be reviewed and approved in advance.

### **Staff Escorts**

NRAO and GBO staff escorts are required. The NRAO staff members will remain with the film crew at all times, and will not leave the filming location regardless of sound, lighting, or dramatic needs of the film crew.

The NRAO staff member has absolute authority to regulate filming and production activities to ensure compliance with safety rules and to protect the facilities, equipment, and operations of the observatory.

Access for filming does not permit the filming crew to move Observatory equipment or exhibits or to modify any existing floor, walls, ceiling, equipment, or landscaping, including drilling of holes for brackets or cable runs. Non-permanent changes such as moving portable equipment or exhibits may be done at the discretion of the Observatory staff.

All Observatory equipment is to be handled only by Observatory staff or, at the discretion of the Observatory, under direct supervision of observatory staff. Observatory staff will not handle, move, or store crew equipment.

### **Utilities**

The film crew must not use Observatory power or water without prior consultation and permission of an attending NRAO staff member.

Access by the film crew to electrical outlets will be provided up to a safe amperage load, based on the capacity of available circuits. Excess power requirements must be provided by the crew through the use of NRAO-approved diesel-powered generators at the expense of the production. Generators powered by gasoline engines are not permitted.

NRAO telephones may be used for non-emergency purposes only by prior arrangement with Observatory staff.

### **Catering**

All provisions of the above section on Radio Interference apply to caterers. All electrical or electronic equipment brought to the VLA must be approved by NRAO staff.

Caterers must obtain all required permits from state and local authorities.

The production company and caterers must provide all equipment and facilities necessary for food preparation. Food preparation and consumption shall be confined to designated areas agreed upon by Observatory staff and crew.

All trash must be disposed of properly following meals. Caterers must remove all food service garbage.

All catering, craft service, construction, strike, and personal trash must be removed from the VLA site at the production company's expense.

### **Use of Animals**

Any animal use must be pre-approved. Any animals to be used in the filming process shall be under the control of qualified personnel at all times.

### **Vehicles**

Use of vehicles on screen in the production must be pre-approved, along with the driving location and speed.

The use of vehicles for transporting production crew and gear is permitted. The number and type of vehicles must be pre-approved, along with the locations they will access.

### **Use of Drones or Aircraft**

In order to avoid presenting hazards to persons or property on the surface, no aircraft, including helicopters and/or drones, may operate below 500 feet above ground level in the airspace above NRAO or GBO property.

No aircraft may approach closer than 500 feet to any antenna. Aircraft, including drones, must obey all FAA rules and regulations and be operated by a licensed FAA pilot (under part 107, Remote Pilot, small Unmanned Aircraft Systems - sUAS). Violations will be reported to the FAA.

Helicopters and/or drones may land only in areas designated and marked by the Observatory. When approaching or departing from a designated landing zone or at any other time, the helicopter must not fly within 500 feet of any antenna.

With the exception of aircraft radios used for communication with air traffic control facilities and with other aircraft for safety, all radio transmitters aboard aircraft flown over facilities must comply with the requirements specified in this document to avoid interference to antenna receiving systems. This includes, but is not limited to, any data downlinks, radar, or communication systems used for coordination of the filming activity. This restriction applies to all aircraft, including all drones.

## **Security**

If deemed necessary by the Observatory for the specifications of the shoot, private security is to be provided at the production company's sole cost and expense.

## **NRAO Staff Advising/On-Camera Appearances**

On-camera appearances by NRAO employees are allowed only with the approval of Observatory management. For such appearances, the employee must be selected and/or approved by NRAO management and depicted performing his or her normal duties or serving as a subject matter expert. The employee's appearance must support NRAO goals and have a beneficial effect for the Observatory. NRAO employees cannot sign talent releases supplied by production companies without prior approval by NRAO management.

The employee is paid by NRAO as part of his or her regular working hours. Any additional payment, stipend, or honorarium must be negotiated directly between the company and the employee.

## **Human Resources**

The production company is responsible for the actions of all personnel brought on NRAO property.

All personnel and talent must comply with all requests or instructions of NRAO staff.

Personnel in any way connected with the production can be ejected from the premises for behavior that is deemed unsafe, disruptive, or offensive. Violation of rules of access or safety rules or other potentially disruptive or dangerous behavior by crew members may result in immediate cessation of all access privileges by attending observatory staff members.

Fees will not be refunded or prorated in such instances.

The production company shall indemnify NRAO and/or GBO from any claims or actions, including from personnel brought on-site by the production company.

Production company staff will be required to complete standard NRAO/GBO visitor screening forms prior to access to property.

## **Liability & Insurance**

The production company shall indemnify, defend, and hold harmless the National Radio Astronomy Observatory, Associated Universities, Inc., the Green Bank Observatory, the U.S. National Science Foundation, the U.S. Government, and all of their officials, officers, employees, or agents (collectively the "indemnities") for any and all claims arising out of or incidental to their visit to the observatories.



Production company agrees to indemnify and hold the observatory and its officers, agents and employees harmless from any and all claims, demands, lawsuits, actions of any kind, damages, judgments, amounts paid in settlement, costs, and expenses (including attorney's fees), which may be incurred or arise out of the production company's exercise of the permission granted or from any of the production company's activities related thereto. The production company certifies they have maintained at their sole expense insurance governing this risk, including their liability to the above-named entities, and must provide a certificate of general and vehicle liability insurance covering the dates of all visits for photography, filming, scouting, preparation, etc.

The insurance must have minimum limits of \$1,000,000/\$2,000,000 for bodily injury liability and \$500,000 for property damage in the comprehensive policy form. The certificate shall name Associated Universities, Inc., and the U.S. Government as additional insured. Such certificates must be provided before gaining access to NRAO facilities.

The production company shall be fully responsible for any damages to Observatory facilities, grounds, exhibits, or equipment caused by the negligence or willful misconduct of production company and its employees.

All Observatory property and facilities used in the production shall be restored by the production company to the same or better condition as when they were made available for the company's use. The production company will be held responsible for such restoration.

The production company will avoid any activity that may cause property damage or bodily injury. Failure at any time to act in such a manner will be grounds for the Observatory to terminate the production shoot. In the unlikely event of property damage or bodily injury, the production company will be liable for associated costs. The funding and timely completion of the repair, to the specification of the Observatory's technical staff is the responsibility of the production company.

The production company acknowledges it will use NRAO and GBO facilities at its own risk and expressly waives any right to make or prosecute claims or demands against the Observatory for any loss, injury, or damage that the production company may sustain by virtue of the exercise of the permission granted or by reason of any defect, deficiency, or impairment which may occur from time to time from any cause.

### **Cancellations or Reductions in Period of Access**

The Observatory reserves the right to cancel or reduce the period of access due to natural causes such as lightning, high winds, other adverse weather conditions, brush fires, etc. In case of cancellation by Observatory staff, the access fee including the deposit will be refunded. If, once setup or filming has begun, a session is reduced in length due to these or other natural or manmade conditions, fees will be returned on a prorated basis but the deposit will be retained by the Observatory.

If an urgent astronomical observation arises that requires an interruption in shooting, shooting will halt and NRAO will conduct this observation, and the production crew will comply with all restrictions on RFI emissions during that time period. NRAO will adjust site access to allow for shooting to continue after the observation is complete and will prorate fees as necessary for this temporary loss of access.

The Observatory shall not be liable for any other costs incurred by the crew, production company, or associated sponsors associated with unavoidable conditions. In any case, the film company shall reimburse the Observatory for actual costs incurred in connection with the production company's use of the premises for the purposes herein permitted.

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## **PRODUCTION FEES**

Fees vary by the type of request including time of year, day of the week, time of day, size of production, locations requested, and NRAO staff time required to facilitate and coordinate the project.

### **Location Fee**

Fees start at \$15,000 per day during hours of regular site operations, 8 am - 4 pm, during site maintenance. Site maintenance days vary by location and time of year. This is for exterior shots ONLY, from the ground, presenting minimal impact on Observatory operations and resources, including production set(s) and basecamp.

For smaller productions that do not interrupt observations, and only access public areas, Observatory staff can discuss a fee appropriate for that activity based on resources and time required.

### **Off hours Access & Interruption of Service**

Off hours access is any time outside of regular site operations including:

- Night
- Weekends (any time day or night)
- Non-maintenance days
- Anytime telescopes are observing

Fees start at the current hourly rate of observing, which varies by instrument, in the range of \$5,000/hour.

### **Incidental Expenses**

Any additional costs incurred by the Observatory in support of the filming activity must be reimbursed by the film company. Such costs may include labor, materials, use of Observatory equipment, utilities, vehicles, offices, etc. Such additional support must be agreed upon in advance by the film company and the Observatory in writing. This reimbursement is in addition to the Location Fees mentioned above.

## **Deposits**

A non-refundable deposit of 20 percent of the Production Fee is required to reserve production dates.

## **Exemptions to Fees**

Journalists/News Media: Verified/credentialed journalists or members of the news media wishing to report from or on the Observatory or interview Observatory staff members are exempt from fees.

Educational Programming: A verified/credentialed production that enhances the image of NRAO/GBO/NSF, is related substantively to the Observatory's mission and resources, and informs a wide audience regarding these topics may be exempted from Observatory usage fees. In addition, any production in which the Observatory's operations and programming are specifically presented to a wide audience, or that the observatory determines will significantly advance the Observatory's own educational or public-outreach goals may be exempted from Observatory usage fees.

**The Observatory reserves the right to grant limited access, waive fees, or modify the above conditions in individual cases when deemed in the best interests of the Observatory. Any acceptions or waivers are at the sole discretion of the Observatory.**

## **Production Release/Distribution**

### **ASSIGNABILITY**

Producer may assign this Agreement but will remain liable for its performance. This Agreement will be binding on and inure to the benefit of all successors and assigns forever. This Agreement contains the entire understanding of the parties regarding its subject matter and supersedes all prior negotiations, understandings, or representations. No modification of this Agreement will be effective unless in writing signed by both parties. Rights granted hereunder are only for the specific production granted a permit (and the promotion thereof) and may not be sold, reused, donated, reproduced, or otherwise used outside of the specific production named on the Permit without prior written consent of NRAO/GBO.

### **OWNERSHIP**

Provided Producer is not in uncured material breach of contract (including but not limited to the depiction language in the permit), VLA hereby acknowledges that Producer shall own all rights, titles, and interests, under copyright and otherwise, in and to the Results and the Picture throughout the universe in perpetuity for all purposes and uses in Producer's sole and absolute discretion, including, without limitation, the use of the Results in connection with the production, distribution, exploitation, marketing, sale, exhibition, advertising or promotion of the Picture and in any and all media, means, methods or processes, now known or hereafter devised.

**NO INJUNCTIVE RELIEF**

In the event of any incidental uncured breach of this Agreement by Producer, Lessor will be entitled to an action at law for monetary damages (only), and Lessor may not enjoin, prevent or delay Producer's use of the Results from filming in the Picture, or the exploitation of the Picture, or the exercise of the rights granted to Producer hereunder, and without limiting the foregoing, Lessor waives the right to seek or obtain injunctive or other equitable relief.

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**ACCEPTANCE OF CONDITIONS**

By its signature below, the production company agrees to indemnify, protect, defend (with counsel acceptable to the Observatory) and hold harmless the National Radio Astronomy Observatory, Associated Universities, Inc., the U.S. National Science Foundation, the Green Bank Observatory, the U.S. Government, and all their officers, employees, attorneys, and agents, from and against any and all claims, demands, losses, damages, liabilities, fines, charges, penalties, administrative and judicial proceedings and orders, judgments, and remedial actions of any kind, including taxes, special charges by others, for loss, injury, damage to person or property in whatever form, claims and demands for damages or loss for infringement of copyright, for libel and slander, and all costs and cleanup actions of any kind, all costs and expenses incurred in connection therewith, including, without limitation, reasonable attorney's fees and costs of defense (collectively, the "losses") arising, directly or indirectly, in whole or in part, out of the filming and related activities performed by filmmaker, its agents, employees, and/or representatives at the Observatory.

The signature of the representative of the production company constitutes acceptance by that company and all its officers, employees, and agents of all the above conditions and also constitutes an agreement to abide by the provisions of this document.

**Signature****Date****Title****Company****Accepted By Observatory:****Date****Authorized Signature**

## **Notes for Specific Locations**

### **Photography and Filming at the Very Large Array**

The Karl G. Jansky Very Large Array (VLA), a facility of the U.S. National Science Foundation, is operated for the purpose of scientific research. It is one of the world's premier facilities for studying the Universe. Scientists from around the world compete for the opportunity to use the VLA for their astronomical research. Observing time on the VLA is extremely valuable, and it operates 24 hours a day, seven days per week.

The VLA is located at a remote, high-altitude (7,000 feet) desert site, and visitors must be aware of and accept the risks of hazards including but not limited to thin air, cold, heat, wind, lightning, and rattlesnakes.

Medical assistance at the VLA site is limited to first aid and outside response to emergencies may require as much as 1-2 hours.

The ranch land surrounding the VLA is all privately owned, be careful to avoid livestock.. When driving along the arms of the VLA, all personnel must stay on designated access roads. If you must open a gate, close it behind you. To use private property for either ground or aerial photography or to gain access to such property, arrangements must be made directly with the individual landowner.

Hardhats must be worn in the vicinity of our instruments, and when accessing the structures.

The film crew must obtain advance permission to move and park vehicles at the VLA site. Parking in fire lanes and other sensitive areas is not permitted.

Unless otherwise negotiated, the VLA Public Visitor Center will remain open for its regular hours of operations and visitors will be permitted to use the VLA Walking Tour.

### **Photography and Filming at the Green Bank Observatory and Green Bank Telescope**

The Green Bank Observatory (GBO) and the Robert C. Byrd Green Bank Telescope (GBT,) a facility of the National Science Foundation, is operated for the purpose of scientific research. The GBT is the world's largest fully-steerable radio telescope and one of the largest moveable human-made structures on Earth. Scientists from around the world compete for the opportunity to use the GBT for their astronomical research. Observing time on the GBT is extremely valuable, and it operates 24 hours a day, seven days per week. Several other instruments also operate on site at GBO.

GBO is located in a remote valley in the Allegheny Mountains of West Virginia. Visitors must be aware of and accept the risks of hazards including but not limited to cold, heat, wind, rain, snow, lightning, and wildlife.

GBO is located in the National Radio Quiet Zone. There is no cellular service within a 1-2 hour radius. Wi-fi is not available onsite. High-speed internet is available through ethernet.

Medical assistance at GBO is limited to first aid and outside response to emergencies may require as much as 1-2 hours.

Diesel vehicles are required to access the areas surrounding our instruments. GBO staff escorts will transport crew members and equipment to these locations.

The land surrounding GBO is owned by the National Forest Service and private individuals. To use private property for either ground or aerial photography or to gain access to such property, arrangements must be made directly with the individual landowner.

Hardhats must be worn in the vicinity of our instruments, and when accessing the structures.

Careful planning must be undertaken for crews that plan multi-day shoots. On-site housing and meals are limited. GBO staff can share guidance on where to access these resources in the surrounding community.

### **Photography and Filming at the Atacama Large Millimeter/submillimeter Array**

Activities may be received by NRAO/GBO News and Public Information and passed directly to the Joint ALMA Observatory partners in Chile to process and coordinate.

ALMA is located in an extremely remote location. Accessing the ALMA site requires many health and security checks to ensure staff and visitor safety. Approval is rarely granted and only for projects that will have a significant impact on public education and understanding of ALMA's science.