

ASSOCIATED UNIVERSITIES, INC.
National Radio Astronomy Observatory
Green Bank Observatory
Draft Cooperative Research And Development Agreement (CRADA)
Confidential & Privileged

CRADA Parties for research and development topics listed in Exhibit A:

- A. *Associated Universities, Inc. (AUI), which operates the Green Bank Observatory (GBO) on behalf of the National Science Foundation (NSF) (collectively called the “Lab”)*
AUI VP of Astronomy-Director’s Office
520 Edgemont Rd
Charlottesville, VA 22903

- B. *Entity Name, (called the “Partner”)*
Division or Title if individual
Address
City, State, Zip

Exhibit A: Research and Development Topics

Reference Number	Title	IP Status

Terms with a ✓ are negotiable.
Terms with an ≈ generally don’t change, unless needed for clarification.
Terms with an * are government requirements.

CRADA Definition ≈

Congress has provided that the director of any FFRDC performing research under contract administered by the National Science Foundation may enter into CRADAs with any person or entity under the authority of 15 USC 3710a.

The Lab performs substantial research and development using certain advanced scientific skills, facilities, personnel, special equipment, information, computer software and know-how pertaining with respect to Technology and the same is available for transfer to the public, and the Lab wishes to encourage and facilitate the transitioning of federally funded technology developments into the private sector for public commercial use.

A CRADA is “...any agreement between one or more Federal laboratories and one or more non-Federal parties under which the Government, through its laboratories, provides personnel, services, facilities, equipment, intellectual property, or other resources, with or without reimbursement (but not

funds to the non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research and development efforts which are consistent with the missions of the laboratory; except that such term does not include a procurement contract or cooperative agreement as those terms are used in sections 6303, 6304, and 6305 of title 31...” See 15 USC 3710a(d)(1)

A CRADA is not a grant, purchase or license and the work associated with a CRADA must be consistent with the Lab mission.

Effective Date ✓

Effective Date of the agreement shall be **DAY MONTH YEAR**, or the date of the signature of the last party to sign the agreement, if such signature is after **DAY MONTH YEAR**.

Period of Agreement ✓

This agreement shall commence on the effective date and **end in XX years**, but can be extended by mutual agreement in writing.

SoW & Tangible Contributions ✓

The Statement of Work (Schedule A) for both parties specifies tangible contributions including personnel, resources, skills, intellectual property, know-how, software, funding amounts (but no federal funds from the Lab), materials, equipment and facilities that will be used for carrying out the work. The SoW contains any necessary delivery schedule, milestones, go/no-go decision points, payment schedules and reimbursements schedules.

Reporting Requirements ✓

Progress reports are to be sent to the other party **two weeks after the end of each six month period**. Progress reports should include exchange of results, performance critiques, additional plans and recommendations.

Additional plans and recommendations outside the SoW must be reduced in writing and referred to the authorized agent of the other party for appropriate action. Plans and recommendations so referred are non-binding unless incorporated into this agreement by written amendment.

Both parties agree to maintain complete records related to work under this agreement. All records must be available for inspection by either party at reasonable times and must be delivered upon request.

A final report by both parties is to be completed and **sent to the other party sixty (60) days** after project completion.

Confidentiality ✓

Any active NDA previously agreed between parties is incorporated by reference to be contemporaneous with the Term of this Agreement. **Only if there is an existing NDA. Number of years TBD, such as 1 to 5 years.**

Cooperation ✓

Lab and Partner shall at all times cooperate in good faith including promptly executing any and all reasonable requests for documents deemed mutually necessary or desired by the other in the preparation and prosecution of applications, in establishing ownership and in the enforcement of any IP rights.

Publicity Use of Lab Names ≈

Partner shall not use the name of NRAO, GBO, LBO, AUI or NSF on any product or service which is directly or indirectly related to this agreement or patent license or assignment agreement in a way that provides or implies endorsement from the Lab. While the Partner is required to follow written and verbal acknowledgements in the Copyright Publications and Disclosures clause, the Partner may additionally use the Lab names to show cooperative development, testing and research was conducted with the Lab.

Copyright Publications & Disclosures ✓

Subject to the requirements of Confidentiality, Prior Trade Secrets, Jointly Developed Trade Secrets and new Subject Inventions clauses, either party may publish or otherwise disclose the results of work done as part of this Agreement under the following conditions:

1. Publishing party will provide a manuscript to the other party's Authorized Agent for review at least sixty (60) days prior to submission for publication;
2. Parties must mark date and authored works with appropriate copyright notice prescribed under USC Title 17;
3. Publications must include the NSF acknowledgement support clause,
 - a. "This material is based upon work supported by the National Science Foundation under Cooperative Agreement No. ####";
4. Publications must include the NSF disclaimer (except for scientific articles published in scientific, technical, or professional journals),
 - a. "Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."
5. Notification must be given to NSF prior to issuing any news releases concerning NSF-supported activities;
6. Verbal disclosures must acknowledge NSF support in all oral interviews and presentations;
7. Publication and/or other disclosure of the results of this Agreement must be delayed as necessary to preserve patent rights in United States of America and any foreign patent rights in a Subject Invention;
 - a. Such a delay will only be granted if requested in writing;
 - b. The requesting party demonstrates promptness and diligence in seeking patent protection on the Subject Invention.

Prior Trade Secrets ≈

Trade Secrets and proprietary information made by either party before entering into this agreement:

1. that are not generally known, not already available to the public, not available from other sources, not made available by the owners to others without obligation concerning its confidentiality,
2. that confers an economic advantage over competitors,
3. where reasonable efforts are made to keep it secret,

4. that are not independently created by the receiving party as shown by its written records, shall be lawfully withheld from disclosure indefinitely, or for so long as held in confidence by the owner of the trade secret, and withheld from the Freedom of Information Act [5 USC (b)(4)] as provided in 15 USC 3710a(c)(7)(A).

Jointly Developed Confidential Know-how ≈

Trade Secrets and proprietary information made jointly during and subject to this agreement:

1. that are not generally known, not already available to the public, not available from other sources, not made available by the owners to others without obligation concerning its confidentiality,
 2. that confers an economic advantage over competitors,
 3. where reasonable efforts are made to keep it secret,
 4. that are not independently created by the receiving party as shown by its written records,
- shall be lawfully withheld from disclosure **for five (5) years (or less if better?)** and withheld from the Freedom of Information Act (5 USC 552 et seq.) for five (5) years as provided in 15 USC 3710a(c)(7)(B).

Ownership of new Subject IP ≈

For all intellectual property (including but not limited to copyrights, inventions, know-how, mask works, trademarks, trade-secrets, etc.), the right to ownership and title shall remain with the creator(s) or inventor(s) of such works, whether made or conceived individually or jointly by contributors to this CRADA from the Lab and/or Partner.

Use License of new Subject IP ✓

The Lab and Partner do **grant each other a** non-exclusive, paid-up, royalty-free **license for internal use** of any new copyrights, inventions, know-how, mask works, trademarks, trade-secrets or other intellectual property **made solely or jointly** during the subject engagement for research and purposes of performance under this agreement and for purposes consistent to the mission (scientific endeavor) of the Lab.

Each Party shall notify the other Party of its intent to file patent applications on inventions or mask works on layouts/topologies, before filing such applications, which are the Subject Inventions and Works.

Use License of existing IP ✓

The Lab and Partner do grant each other a non-exclusive, paid-up, royalty-free license for internal use of copyrights, inventions, know-how, mask works, trademarks, trade-secrets or other intellectual property made prior to this subject engagement that is required for research and purposes of performance under this agreement and for purposes consistent to the mission (scientific endeavor) of the Lab.

New Subject Inventions ✓

Both parties shall co-own any inventions under this agreement made jointly by personnel from both parties. The **Lab shall have first option to file patent applications** for jointly made inventions. The act of filing patent applications does not entitle either party to reimbursement of patent filing costs.

With respect to any such joint inventions, the Parties agree that **neither Party shall have the right to practice joint inventions commercially without receiving written permission from the other Party, which shall not be unreasonably denied.** Each Party shall have the right to practice the entirety of any joint invention non-commercially without obligation to the other Party. **Each party shall have the option to obtain from the other party, an exclusive commercial license,** for the joint invention at a reasonable royalty rate, and with other considerations and conditions to be negotiated in good faith between the Parties.

In the instance where one party is the sole inventor, determined by less than de minimis use of the other party's physical and personnel resources, but additional inventive features are contributed by the other party, the first party shall have the right to separate the first invention from the additional inventive features contributed by the other party, thereby creating two separate instances of inventions. The first invention shall be Solely owned by the inventing party while the second invention shall be jointly co-owned as a Subject Invention.

Licensing of new Subject Inventions ≈

For Subject Inventions made jointly or, solely by the Lab, the Partner shall have the option to negotiate a license in a field of use that is:

1. Counter to the nature of scientific endeavor of the Lab;
2. Not opposed by many potential collaborators;
3. Where the field of use can be determined during the licensing process;
4. Determined not to be against standard operating procedure of the Lab to avoid a pre-negotiated field of use option for an exclusive license.

Government Use License of Inventions *

The Federal Government shall retain government-use license rights pursuant to 35 USC 203, including a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. government throughout the world on any subject invention made by Lab personnel during and subject to this agreement.

Government March-In Rights of Inventions *

The Federal Government shall retain march-in rights pursuant to 35 USC 203, including exceptional circumstances around public health, public safety, emergencies, public use requirements, Partner not substantially manufacturing in the USA, Partner is controlled by rogue country, requiring Partner to license to someone else, or grant a license to a non-Partner party on any subject invention made by Lab personnel during and subject to this agreement.

Audit Rights *

This agreement shall be subject to National Science Foundation review rights.

Indemnification *

Partner shall indemnify, defend and hold harmless Lab, NRAO, GBO, AUI, NSF, their respective members, officers, directors, agents, employees, and persons acting on their behalf, ("Indemnities") from

liability involving the use of the patented inventions, either directly or indirectly, by Partner. Under Federal law, the Lab cannot indemnify the Partner nor provide a freedom-to-practice warranty.

Liability *

Both parties agree that the other party is not responsible for damages or injuries arising from work done under the subject engagement of this agreement, except to the extent that such damages and/or injuries were caused by the negligent or wrongful acts or omissions of its employees, agents or officers.

Availability of Appropriations *

The continuance of this Agreement is subject to the appropriation of funds by the Congress of the United States and of the allocation of funds by the National Science Foundation from which expenditures may legally be made to cover the Lab contributions.

Force Majeure *

Neither party shall be liable for any unforeseeable event beyond its reasonable control not caused by its own the fault or negligence where:

1. The party is unable to perform its obligations under this Agreement;
2. The party is unable to overcome the event by the exercise of due diligence.
 - a. Examples include, but are not limited to, flood, drought, earthquake, storm, fire, pestilence, lightning and other natural catastrophes, epidemic, war, riot, civil disturbance or disobedience, strikes, labor dispute, failure, or sabotage of either party's facilities or any order or injunction made by a court or public agency.

When a force majeure event occurs, the affected party shall promptly notify the other party, and then:

1. Use its best efforts to resume performance as quickly as possible;
2. Suspend performance only for such period of time as is necessary as a result of the force majeure event.

Severability *

The illegality or invalidity of any provision of this Agreement must not impair, affect, or invalidate the other provisions of this Agreement.

Warranties *

Lab does not provide warranties, but will (when? upon request?) with reference to the fact that the Lab owns 100% title to any intellectual property that:

1. may be contributed by the Lab to this CRADA development effort, and/or,
2. may become licensed to the Partner through an option that is subject to this agreement.

Termination ✓

This Agreement may be terminated by either party at any time and shall be effective sixty (60) days after written notice to the other party. All terms of this agreement shall survive any Termination. Partner is required to pay all owed funds at the time of termination, if applicable.

Disputes ≈

Disputes between Lab and Partner shall be adjudicated according to the laws of the Commonwealth of Virginia, and shall be done through binding arbitration under the Streamlined Arbitration Rules and Procedures of JAMS ADR services in the city of Charlottesville, Virginia.

Conflict of Interest Mitigation ✓

The Parties shall disclose any conflict of interest to the other party. If a conflict of interest occurs when a Lab inventor/creator becomes a licensee of subject IP to this agreement, then:

1. The Parties shall define how a conflict of interest shall be managed when the Lab inventor/creator is or becomes a ‘champion” of intellectual property subject to this agreement.
2. The Parties shall define how a conflict of interest shall be managed when the Lab inventor/creator is or becomes a stockholder, moonlighter, or commercializer of intellectual property subject to this agreement.

End of General Terms

Signature Authority

Each person signing this Agreement represents that they are duly authorized, with full authority to bind the Parties, and that no signature of any other person or entity is necessary to bind the Parties.

Counterparts

This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

Electronic Transmission

Each of the Parties hereto agrees that (a) any Notice, consent, or signed document transmitted by electronic transmission (meaning a facsimile, e-mail, or e-mail attachment) to a Party at the e-mail address stated herein shall be treated as an original, written document, with the same binding effect; (b) at the request of either Party, any such document shall be re-executed and redelivered in hard-copy form to the address stated herein; and (c) a Party will not raise the transmission of a Notice, consent, or document by electronic transmission as a defense in any proceeding or action in which the validity of such consent or document is at issue, and hereby forever waives such defense.

IN WITNESS WHEREOF, the duly authorized officers of the parties to this Agreement have executed and delivered this Agreement effective on the date first above written.

Associated Universities, Inc. Authorized Representative

By: _____

Dr. Anthony Beasley, AUI Vice President of Astronomy
520 Edgemont Rd
Charlottesville, VA 22903
434-296-0241
tbeasley@nrao.edu

CRADA Partner Authorized Representative

By: _____

Entity Name, Title
Street
Address
Phone
Email

SCHEDULE A
Statement of Work (SoW)

1. Project Description

Provide a summary statement defining the boundaries of the project in terms of tasks, deliverables, costs and deadlines.

2. Deliverables

Statement of the known deliverables required from this SOW.

2.1 Hardware

Description of the hardware.

2.2 Software

Include information on software and firmware requirements.

2.3 Documentation

Include all drawings, preventive and corrective maintenance documents required.

2.4 Services

Include consulting services required.

2.5 Warranty/Support

Describe any warranty or support requirements here.

2.6 Deliverable Schedule

Describe the delivery schedule, summary milestones, due dates, go/no-go decision points as best known.

2.7 Payment and/or Reimbursement Schedule

Show Partner funding/reimbursement schedule if any. If funding source for Lab is fed agency, provide agency name and contract number. Does the Partner require invoicing for reimbursements?

2.8 Shipping

Provide the Shipping information here with any special considerations or information (ITAR, EAR, other other) as appropriate. Estimate the shipping costs.

3. Project Contacts

Lab PI/TPOC
Name/Title/Division
Street
Address
Phone
Email

Partner PI/TPOC
Name/Title/Division
Street
Address
Phone
Email

AUI/NRAO/GBO Business Office
Richard Sakshaug
520 Edgemont Rd
Charlottesville, VA 220903
434-296-0279
rsakshau@nrao.edu

Partner Business Office
Name/Title/Division
Street
Address
Phone
Email

4. Terms and Conditions

The **estimated cost** of the proposal is \$xxx. This estimated cost includes all deliverables as defined in section 2. The actual cost may vary. Terms of export compliance may be applicable.

4.1 Expected Period of Performance

Identify the timeframe that the project is expected to be performed within.

4.2 Acceptance Criteria

Work performance criteria, quality standards, technical specifications and the intended result or use is undertaken in this CRADA on a best effort basis.

4.3 Exclusions

Items or parameters not considered to be part of this Agreement.

4.4 Constraints

Briefly describe any constraints such as manufacturability, manufacturing cost goal, interface connections with some other device or service, etc.

4.5 Assumptions

Briefly describe assumptions with regards to availability of materials, personnel, equipment and other factors within the Lab.

4.6 Summary Budget Table

5.	Yr 1 Lab	Yr 1 Partner	Yr 2 Lab	Yr 2 Partner	Yr 3 Lab	Yr 3 Partner	Yr 4 Lab	Yr 4 Partner	Yr 5 Lab	Yr 5 Partner
Labor										
ME&S										
Travel										
Indirect Costs										
Total										