FY13 NCAR Directorate Diversity Fund
Proposal Template

Requests for FY13 NCAR Directorate Diversity Funds should be submitted to the NCAR Diversity Committee using this template. Please enter your text into the form fields built into the template, use your Tab and Shift+Tab keys to move forward or backward between the fields. Refer to the UCAR Diversity Fund Guidelines when preparing your request. Please contact Helen Moshak moshak@ucar.edu, ext. 1112 if you have any questions on the process. Raj Pandya, pandya@ucar.edu, ext. 2650 and Bob Roesch, broesch@ucar.edu, ext. 8703 are available to answer questions on proposal topics and contents.

All templates and guidelines are available at the NCAR Diversity Committee URL https://ncar.ucar.edu/directorate/diversity-committee/ncar-diversity-proposals-program

ANTICIPATED TOTAL FY13 FUNDING: $120,000

SUBMISSION DEADLINES:

INITIAL DRAFT FOR PRELIMINARY REVIEW: Friday, August 31st, 2012

FINAL SUBMISSION: Friday, September 14th, 2012

PERIOD OF PERFORMANCE: Up to 24 months. The project must begin in FY13 and may extend into the following fiscal year if required.

MAXIMUM REQUEST PER PROPOSAL: $40,000 (total for entire period of performance)

CO-SPONSORSHIP: Preferred and evaluated in the review process. Please note that regular staff salary may not be counted toward co-sponsorship.

FUNDING LIMITS PER PROJECT: Typically, a project is limited to no more than 2 rounds of funding.

INTER-LAB COLLABORATION, AND COLLABORATION WITH EXTERNAL PARTNERS: Encouraged but not required.

NO-COST EXTENSIONS: subject to approval. Projects may not exceed a 30 month period of performance.

General Guidance:

1. The goal of the NCAR Directorate Diversity Fund is to provide start up funding for projects that increase the long term diversity of the UCAR/NCAR/UCP staff and contribute to enhancing diversity in the geosciences. All proposals should be planned and executed to ensure that:

   No benefit, including hiring for employment or allocation of Diversity Funds, will be allocated to an individual based upon that individual's race, color, religion, national origin, gender, sexual orientation, age, disability, marital status, veteran status, or any other characteristic protected by law. Individuals must be selected and/or hired without regard to these factors.
2. All proposed projects should meet one or more of the following objectives:
   
a) Increase or improve efforts within NCAR to reach and recruit applicants and students from groups that have historically been under-represented in the U.S. geosciences workforce and academic programs.
   
b) Provide education and outreach about academic or job opportunities and increase knowledge of the geosciences in general and interest in NCAR in particular with under-represented populations in the United States.
   
c) Support the initial establishment of long-term scientific, technical or education/outreach partnerships with collaborators at U.S. institutions serving underrepresented populations.
   
d) Increase diversity sensitivity at NCAR. For example, host or participate in diversity conferences/workshops (e.g. focusing on institutional practices and policies, leadership models, or strategies and approaches for increasing diversity).
   
e) Support staff or student retention efforts designed to provide professional development opportunities in improving the communication, collaboration and mentoring skills of, and resources for, all employees.
   
f) Welcome and nurture new students and employees and create a long-term caring community for all employees. For example, one might host workplace activities, including social activities, designed to increase the comfort level of, and inclusion of new recruits.
   
3. Proposals that initiate new efforts to support diversity across NCAR and the U.S. (NOTE: in this document “U.S.” includes Puerto Rico and other US commonwealths and territories) scientific community or support broad/multiple outreach that impact groups of people are preferred. All proposals must have an NCAR PI. Participation from UCP and UCAR is encouraged. All funding will remain in NCAR.
   
a) In order for Graduate Research Assistant (GRA) and Postdoctoral Fellows to be eligible as PIs or to receive funds, the period of performance of the project should not extend beyond the GRA and Postdoctoral Fellow’s term date. Exception requests must be approved by the appropriate NCAR Associate Director and a regular full-time NCAR staff member must serve as the Co-PI with the GRA or Postdoctoral Fellow.
   
4. Period of Performance: Up to 24 months from date of award.
   
5. Diversity Funds: **Typically, a project is limited to no more than 2 rounds of funding.** Funds may be requested and used to pay for:
   
a) an entire diversity project or effort, or
   
b) any portion of a project that meets the goals of the fund, including travel expenses, participant support costs, materials and supplies and advertising expenses
   
c) that portion of an individual’s salary for work that directly supports a diversity effort/function.
   
6. Inter-laboratory collaboration, though encouraged, is not required and will not be part of the review criteria. University collaboration is also encouraged.
Proposal Submission Process, Deadlines and Reporting

Proposal submission is a two step process.

1. INITIAL DRAFT (REQUIRED): An Initial Draft using the Diversity Proposal Template (complete all fields of the proposal template) for preliminary review is due to Friday, August 31st, 2012. Please e-mail the completed proposal template in a MS Word format to Cindy Worster/NCAR DIR (cmw@ucar.edu). All initial drafts will be reviewed by Helen Moshak and Bob Roesch to provide PIs with guidance and support and to ensure compliance with UCAR Diversity Fund Guidelines.

2. FINAL SUBMISSION (REQUIRED): Due Friday, September 14th, 2012. The Final Submission is one PDF document consisting of:
   • A signed version of the completed Proposal Template
   • A completed Budget spreadsheet using the provided template.
   Please e-mail the PDF to Cindy Worster/NCAR DIR (cmw@ucar.edu).

Final Proposals will be reviewed by a review panel convened by the NCAR Diversity Committee and made up of committee members with no conflict of interest. The review panel will provide proposal review and ranking recommendations to the NCAR Executive Committee. The NCAR Executive Committee will make the final award decisions.

If a proposal is awarded, the host program will set up a unique account key for the term of the project for tracking and reporting purposes. All unspent funds will be returned to the NCAR Director’s Office at the conclusion of the project.

Schedule:
- Initial Draft for Preliminary Review Due: Friday, August 31st, 2012
- Final Submission Due: Friday, September 14th, 2012

Review Panel proposal review & recommendation period: September 14-28, 2012
Review and approval by NCAR Executive Committee: October 2012
Target Date for transfer of funds by NCAR Budget and Planning Office - Month End October 2012

Reporting: A narrative final report (2 page minimum), a financial report, and photos are required at the end of the project period. Send them to the attention of Cindy Worster.
   • Include a standard DW-ART “Account Budget Summary” report for the project account number for each FY within the project period.
   • In your final report, include 2-3 photos of the activities or outcomes. (Be sure to obtain a UCAR photo release form at https://ncar.ucar.edu/sites/default/files/images/PHOTO_ModelReleaseMaster.docx for any outside participants). These photos will be uploaded to the Diversity Committee website.
   • The purpose of the report is to share the experience and knowledge gained with other programs.
   • The report will describe the outcomes, the measure of progress and success, the extent of any internal collaborations or university interactions (for reporting purposes only, not a requirement), and the value of the activity and recommended changes, and next steps, if any.
   • If the funds are not spent within the approved project period, they must be returned to the NCAR Directorate.
   • All reports will be posted to the NCAR Diversity Committee URL.
FY13 NCAR Directorate Diversity Fund Proposal

Please enter your text into the form fields below, use your Tab and Shift+Tab keys to move forward or backward between the fields.

Diversity Project title: Building long-term partnerships with targeted US University programs serving under-represented student populations in the Atmospheric Sciences field.

NCAR PI Name: Mary C. Barth PI Email: barthm@ucar.edu

Lab: NESL Division/Program: ACD

All of the following components and questions are required:

1. Executive Summary: Provide a one paragraph executive summary of the project.

   We propose to create partnerships with Atmospheric Sciences programs that have students from historically under-represented populations through the exchange of NCAR Scientists, faculty and students from identified programs. This project will build upon the previous diversity fund project headed by W. Randel who established ties with Howard University. In addition to continuing the efforts with Howard University, we will identify and begin ties with other programs serving students from historically under-represented populations. We offer to coordinate a series of seminars/workshops at their Universities that will allow Scientists to expose/discuss the science they are working with at NCAR and workshops on how to use some of the NCAR/ACD educational tools. We will encourage presentations and dialogues about current field campaigns, possible opportunities for students and professors at NCAR, and current/future collaborations. We propose to support extended visits of graduate students to NCAR to work with ACD scientists on projects of mutual interest. Our aim is to establish, enhance and develop long-term partnerships between minority-serving programs and NCAR Scientists promoting diversity in our division/institution while sharing our scientific community service vision with them.

2. Diversity Objective(s) and Action Plan: Describe the diversity objectives of this project (refer to the UCAR Diversity Fund Guidelines for more information) and the action plan for accomplishing the objectives (typically 1-3 pages).

   Our project goals are to:
   
   - Create and strengthen the relationship and liaison between NCAR and selected underrepresented programs.
   - Offer and promote an opportunity for students, professors and their programs to establish direct connections with NCAR scientists and vice versa.
   - Expose and discuss the NCAR scientists’ research at both the minority-serving institution and via internet seminars or discussions.
Offer workshops on how to use some of the NCAR/ACD educational tools (e.g. TUV, MOZART/forecast, MEGAN/biogenic emissions, WRF-Chem, fire emissions, satellite data analysis - Giovanni, lab experiments, instrumentation, Box Models) in identified programs.

Promote institutions to look for ways to incorporate diversity and increase their number of underrepresented students in their respective programs.

Create and promote non-affiliated and affiliated institutions to have a more active role in their partnerships with NCAR and vice versa.

Promote NCAR’s mission and vision in minority-serving programs, creating a culture and making an impact in their programs and with their participant students.

Build long-term partnerships not only with the programs and professors, but also with participant students. We hope these students will work at NCAR or at NCAR partners’ institutions in the near future bringing and increasing diversity in the atmospheric sciences workforce.

These goals are aligned with (and not limited by) the following Diversity Funds objectives:

- Increase or improve efforts within NCAR to reach and recruit applicants and students from groups that have historically been under-represented in the U.S. geosciences workforce and academic programs.
- Provide education and outreach about academic or job opportunities and increase knowledge of the geosciences in general and interest in NCAR in particular with under-represented populations in the United States.
- Support the initial establishment of long-term scientific, technical or education/outreach partnerships with collaborators at U.S. institutions serving underrepresented populations.

Our goals respond to NCAR’s vision and mission, acting as an integrator, innovator and community builder. Our objectives also support NCAR/UCAR’s commitment to further promote and increase diversity at their institutions.

**Action Plan:**

- Identify, initiate and continue ties with programs serving students from historically under-represented populations.

We have identified two minority-serving programs to start working with during the first funding year.

(a) **Howard University (HU).**

A previous diversity fund project (headed by W. Randel) established ties with Howard University by encouraging graduate student visits to NCAR/ACD. It makes sense to continue building upon that relationship with the HU atmospheric sciences program. ACD has developed collaborations with Howard University faculty and hosted several students over the past few years, and there is a desire from both sides to continue and enhance this partnership.

Howard University is a minority-serving institution with a strong graduate program in atmospheric sciences (HUPAS). HU is also a key partner for the NOAA Center for Atmospheric Sciences - NCAS (a virtual center linking several universities and NOAA scientists) and the Beltsville Center for Climate System Observation - BCCSO (teams of
scientists and students from Howard and collaborators from NASA/GSFC, Penn State and SUNY engaged in fundamental research). It has an active Graduate Student Association for Atmospheric Sciences (GSAAS), which is affiliated as a HU-AMS Student Chapter. The majority of their students belong to historically under-represented populations such as women, African American, and Latino.

Moreover, HU has a consortium with University of Maryland at College Park (both HU and U.Md. are UCAR Member Universities). The latter has a very strong graduate program in Atmospheric and Oceanic Science. Recently HU has incorporated undergraduate degrees (both a major and a minor) in meteorology, atmospheric sciences and atmospheric chemistry. This brings the opportunity for NCAR to impact a bigger under-represented population by HU acting as a base or host to other neighbor institutions who have under-represented populations at their atmospheric sciences programs.

(b) University of Puerto Rico (UPR).

For the last several years, graduate, undergraduate and high school students from Puerto Rico have been participating in UCAR/NCAR programs such as the Spark Pre-College Internship (research experience designed to introduce a diverse community of high school students to the world of atmospheric and related sciences) and SOARS (an undergraduate to graduate program built around a summer research internship, mentoring by top scientists, and a supportive learning community) led by Rajul Pandya. Both programs are dedicated to broadening participation in the atmospheric and related sciences. It is appropriate to continue expanding our relationship with the atmospheric science and related sciences programs in Puerto Rico.

The University of Puerto Rico is the oldest university in Puerto Rico that excels in a well-rounded curriculum. The UPR system consists of 11 university units located throughout the island (see Fig 2). There is a meteorology/atmospheric science program at UPR-Mayaguez (UPRM) that has been growing during the last several years in addition to several chemistry departments throughout the UPR system that are interested in atmospheric science applications. In particular, the UPRM undergraduate student
association is quite active and they have won the AMS Student Chapter Posters Competition for two years in a row demonstrating a new force and interest in this area.

Fig 2. On the left, a map of Puerto Rico with the 11 university units that are part of the University of Puerto Rico system. On the right, students of the Meteorology program from the University of Puerto Rico Mayaguez (UPRM).

Our plan for the first year of this project is to continue to host Howard University student visits and sponsor NCAR scientist visits to Howard University. We will identify and begin collaborations with faculty and students at UPR by sponsoring an exchange of visits by scientists between the two institutions. Depending on the success of the visits, we will host a UPR student for a multi-month visit to NCAR. If the project is not running as expected with any of the institutions identified above, we will identify and begin to establish connections with other minority-serving programs.

- Select a coordinator. It is preferable to have the coordinator be a minority graduate student or post-doc that will act as a liaison between NCAR and the programs involved. The coordinator tasks are to establish connections with identified programs and NCAR scientists, coordinate and market events, make suggestions about possible events, and assist the PI on the accomplishment of the project. The coordinator will receive a monthly stipend or incentive while acting as coordinator. The PI and the coordinator will discuss the amount of the incentive. It could vary depending upon availability of funds and established priorities by the PI. The coordinator will also be supported with resources/materials needed to make his/her work and organized activities a success.

- Coordination of a series of seminars and workshops at the identified programs. The project will support NCAR scientists/staff (~6 scientists per year) to have short visits at the institutions. The visiting scientist will present their research work, talk about possible opportunities at NCAR for students and professors, try to establish long term relationships with members of the program, and provide a hands-on workshop on how to use some of the NCAR/ACD educational tools (e.g. TUV, MOZART/forecast, MEGAN/biogenic emissions, WRF-Chem, fire emissions, satellite data analysis, lab experiments, instrumentation, Box Models) that could be helpful for students’ research and understanding of atmospheric chemistry and physics concepts.

It is imperative to establish direct contact and visit the programs in their respective environments so we can assess their actual resources/limitations, as well as understand and be sensitive to their institutional culture. Further, direct contact allows more buy-in of the people involved in the research projects. By establishing direct contact, we can better serve the programs and succeed in reaching our goals.
Coordinate Online Seminars and Connections. After direct contacts with the programs are made, we propose to continue exposing science, opportunities and building relations through online interactive technology (e.g. ReadyTalk, GoToMeeting, Skype, Gmail chat, etc.). We will promote and coordinate several online seminars per year where NCAR scientists, professors and students of the identified programs can expose their work, express their research interests, and discuss future projects.

Host 1 or 2 students per year for an extended visit at NCAR (3-5 months). The number of students and the period in which the students will stay depends upon availability of funds.

There exists interest in exploring how other projects and services from NCAR can be incorporated and combined toward our efforts. While working with the institutions we seek to understand the best methods to incorporate and increase diversity sensitivity at NCAR, how best to support student retention, possibilities for providing professional development opportunities, improve communication, collaboration and mentoring skill, expand their access to resources (e.g. instrumentation, articles, books), and create a long-term caring community and relationship between NCAR and the programs we will be working with.

In summary, we are looking forward to making long-term connections, and to work together for the benefit of both the identified programs with historically under-represented populations in the atmospheric science field and NCAR.

3. Define how the program/activity success will be measured:

Short-term success will be measured by the accomplishment of NCAR Scientists’ visits to the identified minority-serving programs for the types of seminars and workshops described in the Action Plan, active ongoing interactions between the faculty advisors and NCAR scientists, continuing progress in the graduate student research and NCAR mentorship, student retention in the field and graduation, awareness of the proposed project in ACD and NCAR, and ongoing communications/events with minority students. Long-term success will be based on continued partnerships and collaborations between the programs with under-represented populations and NCAR, encouragement in writing journal papers on the completed research, and fostering future participation of students, post-doc and early career scientists in atmospheric sciences research.

4. Period of Performance: Describe the timeframe for this project (≤ 24 months). The project must begin in FY13.
   Begin Date  11/01/2012
   End Date  10/31/2014

The time frame for this phase is two years, but we hope to extend the project to the future as mutual interests and finances allow.

5. Does this proposal begin to establish or build toward a long-term scientific relationship(s) between NCAR and a US institution(s) serving underrepresented populations (hereinafter, the “Target Institution(s)”)?
6. If YES, describe how progress toward this long-term objective will be measured:

Progress toward the long-term objective will be measured by active ongoing interactions between the students, faculty advisors and NCAR Scientists. Our aim is to make a positive impact in their program, but also to make an effective impact on the actual students that will be the future source of our workforce. In particular, this could be measured by the number of Ph.D. and M.S. degrees obtained by the participants, and the number of participants who eventually obtain post-doctoral positions and subsequent employment in the atmospheric sciences. In essence, it is a measure of whether the students involved in the program follow an atmospheric science career.

7. Does this proposal develop or strengthen NCAR’s partnership(s) with the faculty, students or career offices associated with the US Target Institution(s)?

YES X NO

8. If YES, describe how these efforts will increase communication and recruitment opportunities for NCAR long-term and why a long-term partnership with this institution would be beneficial to NCAR:

The proposal focuses on identifying and working with atmospheric sciences programs serving under-represented populations and US Target Institutions with Hispanic, Latino, African American and Native American students such as Howard University and University of Puerto Rico. This project and our efforts will increase communication and recruitment opportunities for NCAR through coordinated events and actions presented above in the Action Plan section.

9. Is this project likely to increase knowledge regarding the geosciences in general and an interest in NCAR in particular among students at the US Target Institution(s)?

YES X NO

If YES, describe how progress toward this long-term objective will be measured:

This project provides a strong educational component, exposing science and educational tools used at NCAR through seminars and workshops at these US Target Institutions through visits and online communications. Progress toward this long-term objective will be measured by ongoing interactions between students and NCAR scientists, continuing progress in the graduate student research and NCAR mentorship, student retention in the field and graduation, partnerships and collaborations in the future between the participating students and NCAR. In addition, relationships and collaboration between currently participating students and NCAR scientists may facilitate appointments for post-doc positions or employment in the atmospheric sciences research at NCAR.

10. Is this project designed to promote awareness among students and faculty at the US Target Institution(s) regarding available academic opportunities and job opportunities in the geosciences and at NCAR?

YES X NO

If YES, describe how progress towards this long-term objective will be measured:

One of the proposed goals is to promote opportunities and encourage students to participate in research projects, field campaigns, laboratory experiments, and modeling projects, among other opportunities within the US Target Institutions we identified. Progress will be measured by the participation and involvement of students and professors in such opportunities.
11. Does this project involve co-investigators and/or collaborators (internal and external)?
   YES x NO
   If YES, provide the name, title and institution affiliation (if any) for each person

   **Coordinator position:** Tamil Maldonado-Vega. She is a Ph.D. Graduate Student Candidate, and is an energetic female from Howard University who was born in Puerto Rico. She is fluent in both English and Spanish languages, which is a plus for working with the minority-represented institutions mentioned above. She has been working under my supervision since July 2011.

   **Possible Co-Investigators and/or Collaborators:**

   Scientists from NCAR:
   - Dr. Mary C. Barth, Scientist III ACD & MMM
   - Dr. Bill Randel, Director ACD
   - Dr. Sasha Madronich, Senior Scientist
   - Dr. Alex Guenther, Senior Scientist
   - Dr. Louisa Emmons, Scientist III
   - Dr. Gabriele Pfister, Scientist II
   - Dr. John Orlando, Senior Scientist
   - Dr. Geoff Tyndall, Senior Scientist
   - Dr. Alma Hodzic, Scientist II
   - Dr. Steven Massie, Senior Scientist
   - Dr. Teresa Campos, Project Scientist
   - Dr. Christine Wiedinmyer, Scientist III

   Possible Collaborators from Howard University
   - Dr. William R. Stockwell - Associate Professor Chemistry Department (Atmospheric Chemistry Research and Modeling)
   - Dr. Belay B. Demoz - Associate Professor Physics Department (Atmospheric Physics and Chemistry, Meteorological Observations)

   Possible Collaborators from University of Puerto Rico
   - Dr. Hector J. Jimenez, UPRM - Director and Professor of the Physics Department (and Meteorology and Atmospheric Science Program)
   - Dr. Luis F. Bejarano, UPRM - Assistant Professor Meteorology and Atmospheric Science Program
   - Dr. Olga Mayol-Bracero, UPR-Rio Piedras - Associate Professor Chemistry Department - Research: Atmospheric Chemistry and Environmental Chemistry

   **Proposal Budget Request**

12. **Complete and attach a budget using the Excel document, NCAR Diversity Funds Request Template** available at [https://www.ncar.ucar.edu/ncardir/internal/diversity/RFP.php](https://www.ncar.ucar.edu/ncardir/internal/diversity/RFP.php)

   Budget attached.
13. In the field below, please provide a brief budget justification, similar to the NSPIRES or Fastlane requirement and no more than two (2) paragraphs.

The proposed budget is for two years primarily covering travel expenses. We are requesting funds to cover travel expenses for twelve scientists (approximately six scientists per year) to visit the US Targeted Institutions (e.g. Howard University and University of Puerto Rico) for approximately four days. The budget also includes a visit of at least one student from the participant University to visit NCAR for four months per year, as well as a faculty member from that university to visit NCAR for five days per year. Included in the budget are 24 months of Temporary Living Per Diem and travel expenses for the coordinator, materials and supplies needed for marketing and seminars, and an online interactive technology fee.

The budgeted costs are based on historic costs, specifically the Temporary Living Per Diem (TLPD) for the students ($1500/month); airfare, hotel, and per diem for the NCAR scientist’s travel, and students and faculty visits. The NCAR Earth System Laboratory (NESL) and the Atmospheric Chemistry Department (ACD) will each contribute $10,000 toward this effort.

14. Proposal Budget Total: $40,000

Co-sponsorship is preferred and evaluated in the review process. Please note that regular staff salary may not be counted toward co-sponsorship.

Proposal Submission Approval

Diversity Project title: Building long-term partnerships with targeted US University programs serving under-represented student populations in the Atmospheric Sciences field.

NCAR PI Name: Dr. Mary C. Barth

Submitted by: ___________________________ Date 7/12/12
PI Signature

Approved by: ___________________________ Date __________________
NCAR Associate Director(s) Signature(s)