



**The Virginia – North Carolina Alliance for Minority Participation  
&  
The Center for Chemistry of the Universe**

**2011 Summer Research Program at the University of Virginia**

**Brief summary:**

Virginia-North Carolina Louis Stokes Alliance for Minority Participation undergraduate students interested in majoring in a STEM field are invited to spend 8 weeks this summer conducting research in Chemistry, Physics, and Astronomy as part of the Center for Chemistry of the Universe (CCU) and the Virginia-North Carolina Alliance (VA-NC Alliance) Summer Research Program at the University of Virginia. *Rising sophomores or juniors are encouraged to apply*, but all applications will be evaluated. Program participants will interact with faculty, graduate students, and other undergraduate students in the core research areas of the CCU, use state-of-the-art chemical and astronomical equipment, participate in a hands-on experiences at the National Radio Astronomy Observatory (NRAO) facility in Green Bank, WV, and devote at least forty hours per week to research and other scholarly activities. Up to eight applicants will be selected.

For more information on the CCU and the VA-NC Alliance for Minority Participation, please visit <http://www.virginia.edu/ccu/SummerResearchProgram.html> and <http://www.virginia.edu/amp/>.

**Term:**

8 weeks, Summer 2011 (June 5 – July 30, 2011)

**Stipend:**

\$3,250.00. Housing will be provided as well as a modest amount toward a meal card.

**Project Supervisor:**

Dr. Brooks Pate, PhD  
Department of Chemistry at the University of Virginia

**Program Description:**

The 2011 CCU Summer Research Program will enable students to gain experience in the fields of reactive chemistry, astronomical observations, rotational spectroscopy, and computational chemistry/kinetics. This experience will come in the form of classroom lectures/instruction (1 day/week), laboratory research (3 days/week), and group discussion/presentation (1 day/week). The classroom series will build upon material presented in freshman and sophomore level science classes and will provide background information for the laboratory components of the program. In addition, the students will be provided instruction on laboratory safety, ethics in science, approaches to scientific writing, and other research tools. The weekly group discussions will provide an opportunity to summarize laboratory results and establish plans/predictions for subsequent experiments. Students will be divided into groups and will spend approximately five weeks in one of the four core areas listed above. The program will also include two multi-day field experiences at the NRAO Green Bank Telescope. Emphasis will be placed on conducting research in a collaborative setting, where well-defined research goals, frequent communication, and significant contributions from multiple investigators are central to the success of a given project. Finally, participants will be encouraged and have the opportunity to continue their research experience with a CCU scientist throughout their undergraduate career.

**Desirable Skills:**

Rising sophomores and juniors with an interest in a STEM discipline; Motivation to conduct research; Ability to communicate effectively and work well with others in a group setting; Willingness to abide by policies and safety guidelines as established and communicated by CCU/NRAO staff.

Applications are available at [www.virginia.edu/amp](http://www.virginia.edu/amp) and are due March 1, 2011. Decisions will be made by April 1.

Please contact Ms. Shirley Cauley at the VA-NC Alliance office for further information at (434) 243-2080 ([smc2j@virginia.edu](mailto:smc2j@virginia.edu)).