Summer 2011 Internship at Brookhaven National Laboratory

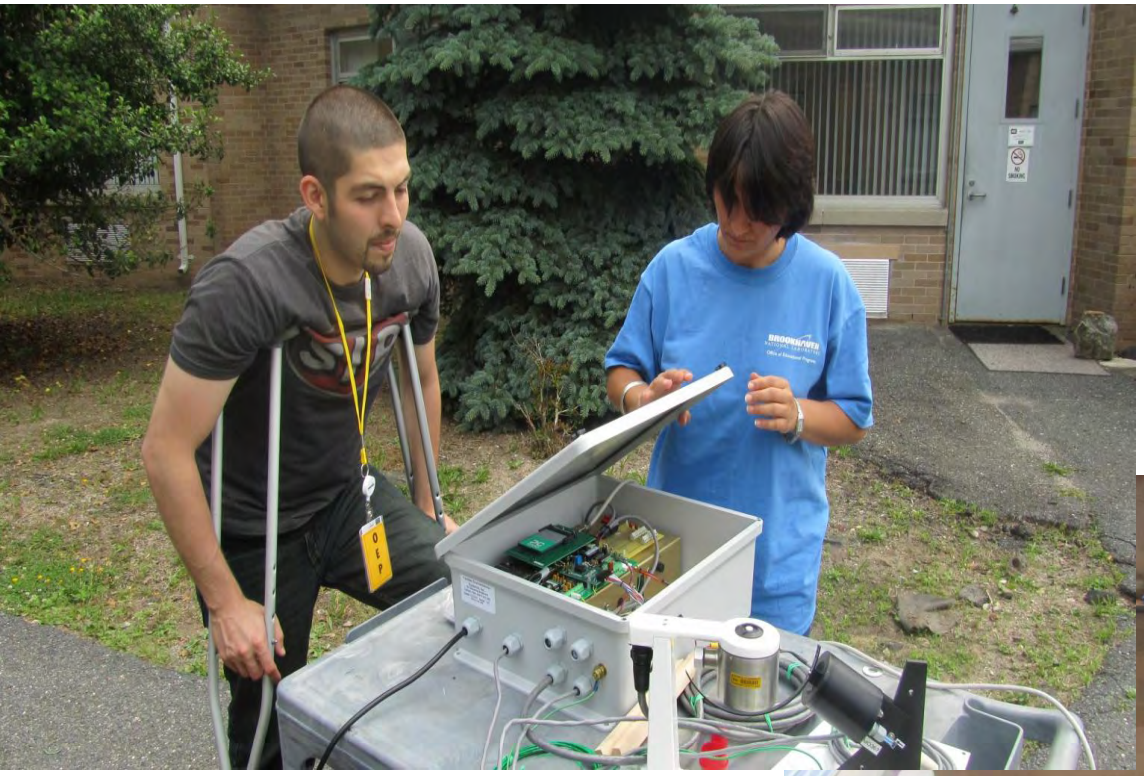
FaST Team

Antonio Aguirre and Agossa Segla

Mentor Viviana Vladutescu

ETET Department/NYCCT

From Our 1st Office --> Our 2nd Office



Taking sample measurements outside.

Calibration and set-up of instrument at the office.

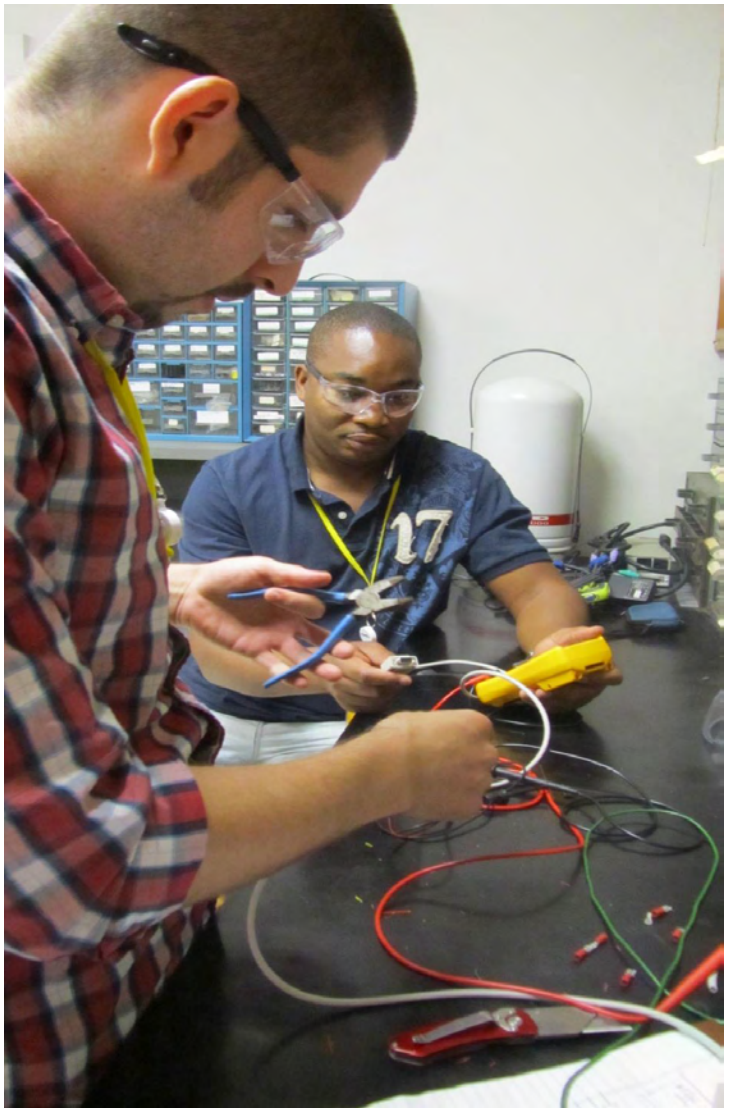
Weekly Intern-Seminars

Dr. Gannet Hallar, researcher from Boulder, CO, speaking to interns about her research.

Dr. Qi Zhang, Assistant Professor from U.C. Davis, speaking to interns about her research.

Hard At Work

In the lab, at BNL, splicing wires for our RS-232 cable.



On the roof taking measurements.

Wildlife At BNL

Just a glimpse at some of the local wildlife.
On most days you see:

- Deer
- Turkey
- Ground hogs
- Cats

Final Days

A few of the researchers we worked with over the summer at the poster presentation.

Fellow Interns and Goodbyes

The day before we leave BNL with fellow interns following the poster event.

Work Hard (*First*), Play Hard (When Appropriate)

Interns enjoying the end of their stay at BNL.

Balloon launch from the NOAA center on-site. This is part of a recreational (tour) day at BNL.

In The Spot Light

A snap-shot of an article printed and published in the BNL newspaper, an honorable achievement.

stored sunlight, and its produc- Brookhaven team constructed *See Plant Oils on p.2*

North, South, East, West — Students Study What Rides the Wind Over Long Island

Five college students from around the country have traded the lazy, hazy days of summer for an opportunity to analyze the haze itself.

During their 10-week internship in programs administered by BNL's Office of Educational Programs, these students participated in a campaign to measure the concentration, chemical composition, size, shape, and optical properties of tiny particles in the atmosphere called aerosols. This work at BNL is supported by DOE's Atmospheric Radiation Measurement (ARM) program.

Roger Stoutenburgh D079081

Students who studied aerosols and the environment with mentors Stephen Springston (second from left) and Art Sedlacek (right) are: (from left) Danielle Weech, Tony Aguirre, Erica Schreiber, Stephanie DeJong, and Agossa Segla.

Aerosols arrive in the atmosphere from many different starting points — both natural and anthropogenic. They come from the burning of fossil fuels, from ocean mist and desert dust, from factory emissions, and from volcanic activities. Some are formed directly in the atmosphere from plant and human emissions.

"Aerosols are neither al- dent. "On one hand, aerosols play a major role in causing cloud formation and reducing solar radiation, which helps provide an overall 'cooling' effect for our planet. But on the other, some types of aerosols contribute to global warming by absorbing the sun's heat rather than bouncing it back

many roles —aerosols play.

"Some aerosols act as direct influences on climate change by limiting or enhancing solar radiation, but others have a more indirect effect," says Erika Schreiber, a SULI student from Cornell University. "Aerosols provide particles for water drop- lets to cling to in the air, which

assist in a variety of daily tasks, from sticking a reminder to the fridge door to storing information on a computer's hard drive. Ferroelectrics are materials that display a permanent electric polarization — a set direction of charge — and respond to the application of an electric field by switching this direction. They

BSA Distinguished Lec

Using the Sun To Power the

Daniel Nocera, a Massachusetts Institute of Technology (MIT) professor whose recent research focuses on solar-powered fuels, will give a BSA Distinguished Lecture titled "Harnessing Energy from the Sun for Six Billion People — One at a Time," on Thursday, September 8, at 4 p.m. in Berkner Hall. BSA Distinguished Lectures are sponsored by BSA, the company that manages BNL, to bring topics of general interest before the Lab community and the public. The lecture is free, and no preregistra-