

Summer 2011 Internship by Viviana Vladutescu

This summer myself and my students participated in an Intensive Observational Period (IOP) measurement campaign at Brookhaven National Laboratory (BNL) in Upton, NY, USA. As part of a FAST (Faculty and Student Teams) Program, we were involved in the measurement and analysis of physical, chemical and optical properties of aerosols at BNL. These parameters were measured over a period of 10 weeks. During this campaign 4 sea-tainers loaded with more than 20 environmental instruments performed measurements of the above mentioned aerosol properties. Our team's responsibility was to install, configure and perform data reduction with and from an MFRSR instrument and further perform inter-comparisons between the aerosol optical depth collected with this instrument and a Cimel sunphotometer and respectively Microtops II Ozone and Sunphotometers. Since we participated in the program as a Faculty and Student Team we were supported by the FaST program/ Office of Educational Programs at BNL and LSAMP (Louis Stokes Alliance for Minority Program) at CUNY. The data collected from these instruments will be made available to the scientific community on the Atmospheric Radiation Measurements site (www.arm.gov) site within 6 months from the end of the campaign.

Some of the instruments used in the IOP are shown in the short movie below:

<http://www.youtube.com/watch?v=TxSbXRuf0d0>



On the roof of the Earth Sciences Building (click for full-res images)

The NYCCT team has worked hard to measure optical properties (aerosol optical depth and Angstrom coefficients) of aerosols at BNL between June 6th and August 13th, 2011.



Working at the Brookhaven National Laboratory during the summer of 2011 with Agossa Segla

Agossa Segla's research at Brookhaven National Laboratory (BNL) involved solar radiation measurements with Microtops II Sunphotometer and intercomparison with the Multifilter Rotating Shadowband Radiometer (MFRSR) and Cimel Sunphotometer. The data collected from these instruments resulted in aerosol optical depth (AOD) levels at different wavelengths over the entire summer.

See his research paper here: [Agossa Segla Research Paper 2011-08-11](#)

See his presentation here: [Agossa Segla's Poster 2011-08-10](#)



Working with Antonio Aguirre on data reduction of the MFRSR at BNL during the summer of 2011

During the BNL internship Antonio (Tony) Aguirre was involved in data collection and analysis of the solar irradiance as measured by a MFRSR instrument. The results of the AOD and Angstrom exponent at different wavelengths measured by this instrument were compared with Cimel and Microtops II Sunphotometer AOD.

See Tony's research paper: [AAguirre Research Paper BNL 2011](#)

See Tony's presentation here: [Tony BNL Poster 2011](#)

The anatomy of the MFRSR is shown on the left. This instrument was configured and installed on the roof of the Earth Sciences Department. On the right side Tony and Agossa are collecting solar irradiance using Microtops II Sunphotometers and Ozone meters. These instruments were used for solar irradiance measurements at different wavelengths.



The MFRSR

The anatomy of the MFRSR is shown on the left. This instrument was configured and installed on the roof of the Earth Sciences Department. On the right side Tony and Agossa are collecting solar irradiance using Microtops II Sunphotometers and Ozone meters. These instruments were used for solar irradiance measurements at different wavelengths.



Tony and Agossa

Some of our friends at BNL:



It was fun observing the wild life while at BNL