Tarique Blue

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***Field Trip Reflection***

**On 3/15/16, I accompanied my class on a field trip to the Optical Remote Sensing Laboratory on the CUNY City College of New York campus in Harlem. On the trip I obtained a variety of knowledgeable tidbits such as the operations of the laboratory's Lidar laser, The CIMEL Sun photometer, which was not present during the trip, & the Microwave Radiometer. For example, I found it interesting on how the Lasing process works for the Backscatter lidar system and the construction/ coordination of all the sensors & optics that allow the laser to travel to the roof of the building. Another interesting observation was how the Lidar laser was equipped with a failsafe interlock, which disables the laser if the presence of an aircraft is approaching the laser and allows you to re-enable the laser once the aircraft leaves the laser's path.**

**What I enjoyed learning about the Sun Photometer was how it directly measures the incoming solar energy and how it studies the aerosols and particles that hovers in our atmosphere. As far as the MWIR Radiometer, I gathered that this instrument is responsible for producing results such as water vapor, air temperature & humidity, along with the fail safe feature of detecting rainfall and discontinuing readings thanks to the rain sensor installed above the Radiometer.**

**Moreover, I also gained a lot of useful information from the slides regarding LIDAR on Blackboard. In the slides, I learned that LIDAR measures the properties of scattered light to obtain the distance and ranges of a target, and due to it's active RS characteristics, it’s able to generate it’s own source of power & that allows it to be applied at any time, as opposed to a Sun photometer which needs the sun to apply energy for it to operate. Also, I learned that the system is broken up to several main components such as the laser transmitter w/ steering mirrors, the optical receiver (telescope), signal detectors (i.e. avalanche diodes & pre-amps) & data acquisition/control (i.e. photon counters, scanners, synchronizers & computers)**