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NASA/ASEE SUMMER FACULTY FELLOWSHIP PROGRAM

MARSHALL SPACE FLIGHT CENTER
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE

THE MEASUREMENT AND ANALYSIS OF LEAF SPECTRAL REFLECTANCE OF TWO STANDS OF LOBLOLLY PINE POPULATIONS

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NASA/MSFC:

        Office: Space Science Laboratory
        Division: Earth Science & Applications
        Branch: Earth System Processes & Modeling

My research was under the mentorship of Dr. Jeff Luvall. I worked at Marshall from June 1 through August 6, 1993. My proposal titled "The Measurement and Analysis of Leaf Spectral Reflectance of Two Stands of Loblolly Pine Populations." The populations for this study were chosen from a larger population of 31 families managed by the International Forest Seed Company, Odenville, Alabama. The technology for mobile ground base spectral detecting is new and therefore the majority of time, June 2 through July 9, this summer was spent on learning the techniques of the Spectrometer II spectroradiometer used in the gathering of spectra information. The activities included in the learning process were as follows:

- calibration of the equipment
- programming the associated computer for data management
- operation of the spectral devices
- input and output of data

From July 12 through August 3 the time was spent on learning the 'STATGRAP' computer software. This software will be used in the analysis of the data retrieved by the Spectrometer II spectroradiometer.

Dr. Greg Carter, at Stennis, a colleague of Dr. Luvall, has been conducting similar work with different instruments and procedures and has agreed to host us for a training session on data gathering and analysis. This visit, which was previously planned for July 9, 1993, but had to be postponed because of schedule conflicts, is now confirmed for August 18-22, 1993. This trip to Stennis will provide the knowledge for conducting the field operations in my study, i.e., gathering of data and file conversions.