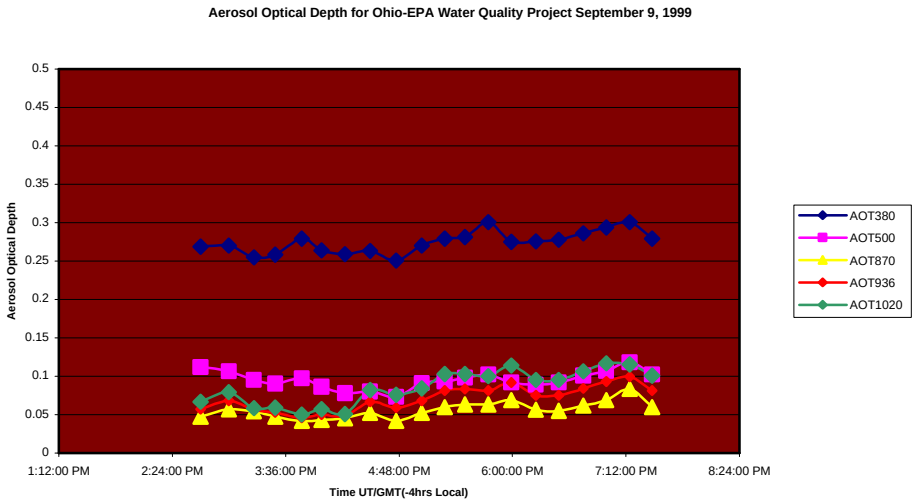
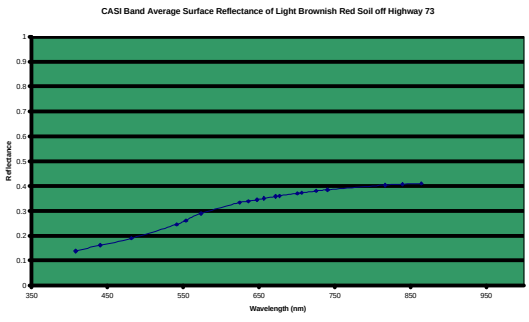
Project Profile –Specialized Services

ATMOSPHERIC CORRECTION OF CASI MULTISPECTRAL IMAGERY FOR WATER QUALITY MAPPING OF THE MIAMI RIVER, OHIO

The National Exposure Research Exposure Research Laboratory of the Environmental Protection Agency embarked on a remote sensing campaign to use HyperSpectral imagery from the CASI for mapping water quality. A component of the project involved atmospheric correction of the CASI imagery including in-situ measurements. The measurements involved the collection of surface ground reflectance and sun photometer data. These measurements were then used to derive aerosol optical depth during the over flights and site-specific information for the model. An automated process using software created by the Center for Research in Earth and Space Technology at York University was implemented to process the imagery data. This included radiometric correction of CASI imagery to remove sensor characteristics from the data and the implementation of a hybrid atmospheric model CAM5S. 4DM was responsible for collecting in-situ measurements and processing the data. Preliminary comparisons between ground and modeled imagery was also carried out by 4DM to evaluate results.





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