

Julie Castellanos

Background: Atlanta, GA

Education: Georgia Institute of Technology (2001-Present)
Will graduate Fall 2006

Research Interests:

Aqueous Geochemistry

- Molecular weight of humic substances in water samples
- Tidal transport of major cations in Salt Marsh Skidaway Island, GA

Environmental

- Use of UAVs for Earth science research

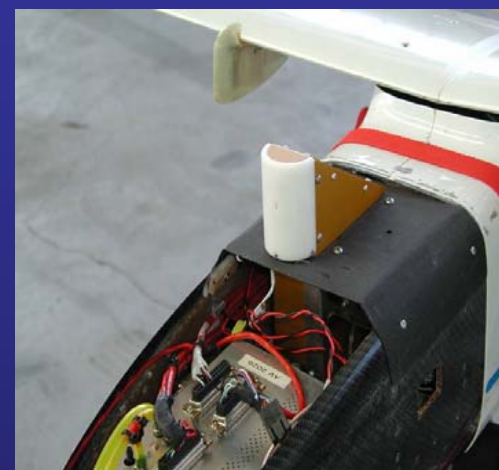
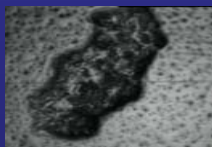
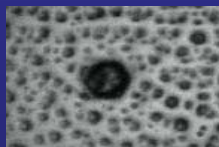


Current Research

The study of mixed phase clouds using a mini-VIPS on a UAV platform

Why UAV's? In-situ observations in high risk areas,

What is VIPS? Video Ice Particle Sampler. Captures and records images of ice particles ranging from 5 to >150 μm .



We then process these images in IDL and use Excel to obtain histograms of area ratio and number distributions, among other things.

Current Goals:

Continue studying the microphysical properties of clouds and their role in global climate.

Draw inter-comparisons between seasons to determine how arctic clouds respond to changes in aerosol concentration and/or temperature.