



EAS 6145: REMOTE SENSING OF THE ATMOSPHERE AND OCEANS

Fall 2019

Meeting Time: Monday/Wednesday/Friday 1:55 - 2:45 PM

Instructors: Prof. Irina N. Sokolik

office: ES&T 3145, phone 404-894-6180
isokolik@eas.gatech.edu

Dr. Leda Sox

office: ES&T 2252, phone 404-407-7097
Leda.Sox@gtri.gatech.edu

Description: This course provides a foundation for understanding the physical principles of remote sensing of the atmosphere and oceans. The course is designed as a collection of lectures and computer modeling laboratories. The lectures focus on the fundamentals of the interactions between electromagnetic radiation and atmospheric gases, aerosols and clouds, and ocean surfaces, covering the spectrum from the ultraviolet through the microwave. The labs provide hands-on experience in using remote sensing data for various applications in atmospheric and oceanic sciences. Topics to be covered include aerosol and cloud property retrievals, ozone and air pollution characterization, vertical temperature and humidity profile retrievals, sea ice characterization, and retrievals of ocean color and sea surface temperature. The main goal of the course is to provide a broad conceptual framework for physical understanding the methodology and applications of remote sensing.

Required Text: *Remote Sensing of the Lower Atmosphere: An Introduction.*

G.Stephens. Oxford Univ. Press 1994.

Course Website: http://irina.eas.gatech.edu/EAS6145_Fall2019/