



Active and Passive Microwave Remote Sensing

Most citations come from the main text book: Jensen, J.R., 2007, Remote Sensing of the Environment: an Earth resource perspective, 2nd ed., Prentice Hall, 592p



Active and Passive Microwave Remote Sensing

- active microwave (RADAR), which is based on the transmission of long wavelength microwaves (e.g., 3-25cm) through the atmosphere and then recording the amount of energy backscattered from the terrain
- LIDAR which is based on the transmission of relatively short-wavelength laser light (e.g., 1040nm) and then recording the amount of light backscattered from the terrain
- SONAR which is based on the transmission of sound waves through a water column and then recording the amount of energy backscattered from the bottom or from objects within the water column.



Active and Passive Microwave Remote Sensing

History of Active Microwave (RADAR) Remote Sensing

- Advantages of RADAR Remote Sensing



Active and Passive Microwave Remote Sensing

History of Active Microwave (RADAR) Remote Sensing

- RADAR wavelengths and frequencies



Active and Passive Microwave Remote Sensing

Active Microwave System Components

- The wavelength and frequency of commonly used RADAR bands



Active and Passive Microwave Remote Sensing

Active Microwave System Components

- Geometric characteristics of radar imagery



Active and Passive Microwave Remote Sensing

Active Microwave System Components

- Polarization of RADAR



Active and Passive Microwave Remote Sensing RADAR Interferometry

- RADAR Interferometry