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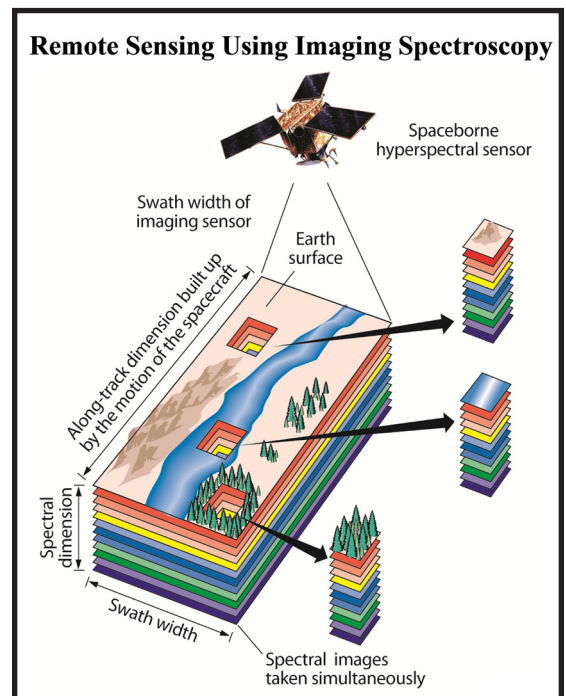


2012 Distinguished Alumni Award

Department of Physics Colloquium



Imaging spectroscopy is a sophisticated tool used to address a broad range of scientific questions in remote sensing. Imaging spectroscopy is an evolution of the multi-spectral imagers that are commonly employed for remote sensing such as NASA's Landsat series. This talk is a broad overview of the technology including a conceptual introduction, a review of the optical forms that are generally applied with a more detailed description of the Crisp-Offner design, a description of the established techniques employed for both the laboratory and field (vicarious) calibration in order to convert the raw data to physical units, the removal of the deleterious effects of the atmosphere through the application of the principles of radiative transfer, and the techniques used for performing material detection.



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