

Space Instrumentation

EOS 895 (Phys 895) Fall 2002
Fridays 1:10-3:00 pm, Morse 301

Course Outline

9/6	Quinn	Introduction
9/13	Martin	Hyperspectral Earth Observations
9/20	Kistler	Magnetospheric Plasma Spectroscopy
9/27	Ryan	Groundwinds
10/4	Campbell	Ocean Remote Sensing
10/11	Galvin	Heliospheric Plasma Spectroscopy
10/18	Rock	Space Instrumentation to Monitor Photosynthetic Capacity
10/25	Macri	Instrument Development & Qualification -- Concept to Flight
11/1	Fuselier	Scientific Mission Design
11/8	Hertzberg	High Voltage & Vacuum Issues
11/15	Torbert	Space Computing & Instrument Control
11/22	McConnell	Energetic Photon & Particle Measurements
11/29	-----	NO CLASS Thanksgiving Break
12/6	Granoff	Mechanical Design, Test, & Materials for Space
12/13	Quinn	Plasma Remote Sensing

1) How, in detail, do the science questions drive the measurement capability, which in turn forces specific hardware and mission requirements?

2) What are the key factors that limit the scientific usefulness of the measurements (e.g. background, image resolution, time resolution, counting statistics,...). What in the instrument sets these limits?

3) What would be required to make a significant improvement scientifically? What does this imply for instrumentation?

One homework problem assigned each week, due at beginning of the next class.

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