Advanced Geostationary Satellite Infrared Sounding Sensor Requirements

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The environmental measurement objectives of advanced geostationary satellite infrared sounding sensors are considered. The sensor requirements, needed to achieve the environmental measurement objectives, are defined in terms of horizontal resolution, horizontal coverage, temporal resolution, spectral resolution, spectral coverage, field-of-view co-registration, spectral radiance noise, absolute radiometric accuracy, and the need, and requirements for, a built-in or co-registered imager. Results from airborne NAST spectral radiance measurements, polar orbiting AIRS and MODIS radiance observations, and simulated Geosynchronous Imaging Fourier Transform Spectrometer (GIFTS) radiance data, are used to support the sensor requirements defined in this presentation.

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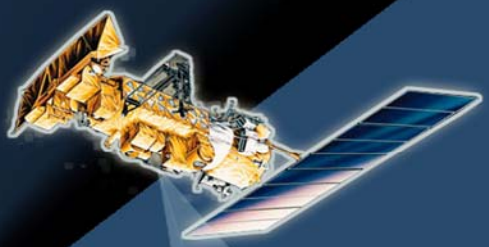

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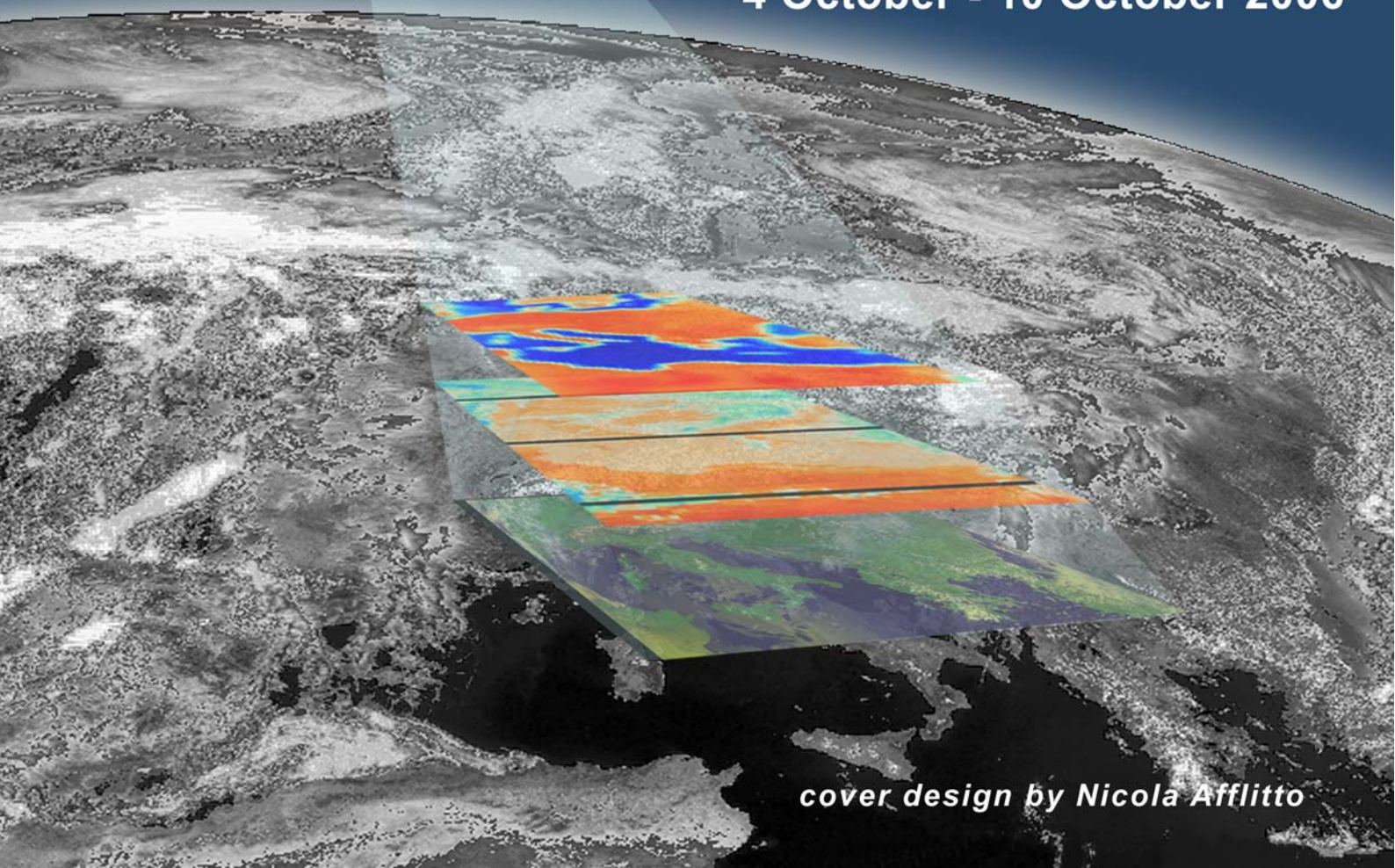

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