



AEROSPACE ENGINEERING SCIENCES

Seminar



Thomas Woods

LASP

University of Colorado Boulder

Early Results and Lessons Learned from the Miniature X-ray Solar Spectrometer (MinXSS) CubeSat Mission

The Miniature X-ray Solar Spectrometer (MinXSS) is a 3-Unit (3U) CubeSat to study the energy distribution of solar flare soft X-ray (SXR) emissions of the quiet Sun, active regions, and during flares and to model the solar SXR impact in Earth's ionosphere, thermosphere, and

mesosphere (ITM) using these MinXSS solar measurements. The MinXSS CubeSat mission was designed through CU's Aerospace student project course to make new measurements of the solar SXR spectra using the Amptek X123 X-ray spectrometer. The MinXSS CubeSat is the first to fly the high-precision 3-axis control attitude determination and control system (ADCS) from Blue Canyon Technologies (BCT). The MinXSS CubeSat was launched on December 6, 2015 to the International Space Station (ISS) and was then deployed from the ISS on May 16, 2016. This presentation will include an overview of the MinXSS CubeSat design, some early MinXSS results about the solar SXR spectra and its variability during June-September 2016, and some lessons learned from this CubeSat mission.

Wednesday, September 28, 2016

12:00 noon

DLC Bechtel Collaboratory

Casual lunch served!

Biography:

Dr. Thomas Woods is the Associate Director of Technical Divisions of the Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado in Boulder. His research is focused primarily on the solar ultraviolet irradiance and its effects on Earth's atmosphere and climate change. Dr. Woods is involved with several NASA and NOAA satellite programs. He is the Principal Investigator (PI) of the TIMED SEE and SDO EVE satellite instrument programs at LASP and is also the PI of the SORCE and MinXSS missions.

