



ATOC COLLOQUIUM

Welcome!

Please join us for the next ATOC Colloquium on **Friday, March 10** from **11:00 AM–12:00 PM**, which will be held in **SEEC S228 and simulcast over Zoom**. This week's colloquium features **Dr. Yolanda Shea (NASA Langley)**. Please join us for coffee beginning at 10:45 AM and stay for lunch catered by Illegal Pete's afterwards.

Using Earth-Reflected Solar Radiation to Identify and Unravel Climate Change Mysteries from Space

Monitoring climate change from space requires measurements that are highly accurate, stable, and contain sufficient information content for both climate change detection and attribution. The Climate Absolute Radiance and Refractivity Observatory (CLARREO) Pathfinder (CPF) mission has been designed to take shortwave hyperspectral measurements with unprecedented accuracy so that it would have these critical qualities. The CPF instrument is based on the HyperSpectral Imager for Climate Science (HySICS), developed by the Laboratory for Atmospheric and Space Physics, and will provide a unique view of Earth with the combination of its unprecedented radiometric accuracy, spectral range (350-2300 nm), spectral resolution and sampling, and spatial resolution. CPF measurements will also serve as an on-orbit intercalibration reference for other operational shortwave satellite instruments. Spectrally resolved reflected solar radiation contains critical information about Earth's atmosphere and surface composition and can therefore be used to identify changes in key essential climate variables. This presentation will showcase the value of exploiting the wealth of information contained in accurate, hyperspectral shortwave radiation to improve our understanding of Earth's changing climate and discuss how CPF measurements will be a powerful contribution to the data used to unravel the mysteries of Earth's evolving climate system.



Location: SEEC S228 & Zoom

Zoom:

<https://cuboulder.zoom.us/j/97845417945>

Password: ATOC

About the ATOC Colloquium

The Department of Atmospheric and Oceanic Sciences (ATOC) Colloquium is typically held **every other Friday** from **11:00 AM–Noon**. Colloquia alternate between the following formats: (A) Full-length talk by a faculty member or invited speaker, (B) Three conference-length talks by graduate students. If you would like to nominate a speaker (including self), please email the ATOC Colloquium Committee Chair, Prof. Andrew Winters (andrew.c.winters@colorado.edu). Please visit www.colorado.edu/atoc/colloquium for further details.