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## FSTRC - A Longwave Radiation Application for iOS devices

### Abstract

FSTRC is an iPad/iPhone application that enables students and researchers alike to visualize and quantify a number of terrestrial radiation quantities important for understanding many climate and remote-sensing problems. The application's graphical user interface (GUI) allows a user to easily input atmospheric data of their choice to a calibrated radiative transfer model that calculates the spectral radiance field throughout the atmosphere. The GUI then allows for a selection of specific parameters for manipulation, display, listing and/or saving, including:

- The angular and vertical distributions of Up-and-Downwelling spectral radiance,
- Spectrally integrated radiance vertical and angular distributions,
- Spectrally integrated, vertical distributions of radiant Flux Densities,
- Spectrally integrated, vertical distributions of radiative Cooling Rates,
- Cooling Rate vertical and spectral distribution, and
- Trace Gas Radiative Forcing.

The primary new aspect of this application is the transformation and installation of the technology to the iPhone/iPad iOS operating system. Similar, although not as extensive, desktop or web-based models have been developed in the past, but those require a desktop or laptop computer to perform and/or access the calculations. As such, the model is much more useful for in-class discussions and for in the field or office calculations.

The presentation will summarize the transformation from the desktop application, and provide demonstrations for various meteorological scenarios

<b>Time:</b>	Thursday, Feb. 10, 2020 @ 3:30 PM
<b>Location:</b>	EOA 1044