



A Multi-Satellite Approach for Estimating Radiative Fluxes

Rachel Pinker, Xiaolei Niu, Margaret Wonsick, and Yingtao Ma

Department of Atmospheric and Oceanic Science, University of Maryland, College Park, MD 20742, USA.

There is a need in accurate information on radiative fluxes, both at the Top of the Atmosphere (TOA) and at the surface, for estimating atmospheric heating, validation of climate models, hydrological and ecological modeling, and assimilation into climate models. The success of satellite methods to derive such information over most of the globe has been demonstrated and the data are extensively used for numerous applications. At present the needs of problematic climatic regions that require high spatial resolution, are not met. In this study discussed will be newly developed information on radiative fluxes from several satellites with a focus on MODIS and their applications in climate research over land and oceans.