## Use of Satellite Observation for the Evaluation of Reanalysis Products at Global and Climatic Time Scales

## Yingtao Ma

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

Rachel T. Pinker

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

Reanalysis data assimilation systems, with their ability to objectively combine information from observations and numerical models, produce long term retrospective records of global atmospheric fields, including radiative fluxes at both boundaries of the atmosphere. Radiative energy is not only an important component of the climate system but also a useful diagnostic tool to provide independent test for cloud representation in the reanalysis data. In this presentation shortwave fluxes (SW) from various reanalysis products will be evaluated against a new version of a retrieval methodology developed at the University of Maryland which provides a 26 year record of SW fluxes as retrieved from the ISCCP DX cloud data at 0.5<sup>0</sup> spatial resolution at 3-hourly time intervals. SW fluxes from ECMWF, NCEP, and JMA reanalysis will be used and compared with the satellite retrievals and problematic regions will be identified. The satellite retrievals will be initially evaluated by comparison with ground observations from a global network to establish a benchmark for the quality of the satellite observation.

## **Corresponding Author:**

Name:	Yingtao Ma
Organization:	Dept. of AOSC, Univ. of Maryland
Address:	2437 CSS BLDG
	Dept. of AOSC, Univ. of Maryland
	College Park, MD 20742
	USA