Current Status of Multi-Angle Implementation of Atmospheric Correction (MAIAC) Algorithm

A. Lyapustin[1] and Y. Wang[2]

[1]NASA Goddard Space Flight Center, mail code 613.2, Greenbelt, MD 20771, USA
[2]University of Maryland Baltimore County, 1000 Hilltop Circle, Baltimore, MD 21250, USA

E-mail: Alexei.I.Lyapustin@nasa.gov

A new Multi-Angle Implementation of Atmospheric Correction (*MAIAC*) algorithm has been developed for MODIS. MAIAC uses a time series and an image based rather than pixel-based processing to perform simultaneous retrievals of aerosol properties and surface bidirectional reflectance. It is a generic algorithm which works over all land surface types with the exception of snow. MAIAC has an internal Cloud Mask, a dynamic land-water-snow classification and a surface change mask which allows it to flexibly choose processing path over different surfaces. A distinct feature of MAIAC is a high 1 km resolution of aerosol retrievals including optical thickness and fine mode fraction, which is required in different applications including the air quality analysis. An overview of the algorithm, results of AERONET validation, and examples of comparison with MODIS Collection 5 aerosol product, including Deep Blue algorithm, will be presented for different parts of the world including continental USA, Persian Gulf region and India.