

Models, In situ, and Remote sensing of Aerosols (MIRA) International Working Group

Chip Trepte^{1*}, Maria Obiminda Cambaliza², Mian Chin³, Oleg Dubovik⁴, Sang-Woo Kim⁵, and Greg Schuster¹

¹*NASA Langley Research Center, Hampton, VA*

²*Ateneo de manila University and Manila Observatory, Philippines*

³*NASA Goddard Space Flight Center, Greenbelt, MD*

⁴*CNRS/University of Lille, France*

⁵*Seoul National University, Korea*

^b *Affiliation, City, Country*

*Corresponding author e-mail: Chrles.R.Trepte@nasa.gov

There is a natural partitioning of scientific interest amongst three focus areas of aerosol research: modeling, in situ measurements, and remote sensing observations. The community benefits when these groups interact, with overall benefits towards advancing our understanding of climate, weather, and air quality. To this end, MIRA seeks to foster international collaborations across disciplines and regional boundaries and offers a complementary association with established international working groups.

Within the present framework, MIRA has identified four initial focus areas, with opportunities to add more by the working group. One effort advances knowledge of the aerosol lidar ratio for different aerosol compositions and locations to improve backscatter lidar retrievals from satellites and ground-based instruments. Another effort seeks to improve aerosol optical parameters used by climate and radiative transfer models. A third effort focuses on harmonizing aerosol assimilation models with satellite measurement retrievals, and a fourth interest seeks to develop retrievals of aerosol Particulate Matter from remote sensing measurements.

The presentation will provide an overview of MIRA and ways for the community to engage.

Keywords: aerosol, remote sensing, particulate matter, lidar ratio