



Models, In situ, and Remote sensing of Aerosols

MIRA News Number 3
June 30, 2022

Welcome to the quasi-quarterly newsletter of the *Models, In situ, and Remote sensing of Aerosols* (MIRA) working group. Previous newsletters can be found at <https://science.larc.nasa.gov/mira-wg/info/>. The MIRA working group is open to all interested aerosol scientists.

Overview

MIRA is a forum that fosters international collaborations amongst the aerosol Modeling, In situ, and Remote sensing specialties. MIRA encourages projects and ideas that improve the usefulness of measurements by linking them to other aerosol disciplines, and provides a forum for discussing the relationships between these disciplines. More details and the list of MIRA projects can be found on the MIRA webpage at <https://science.larc.nasa.gov/mira-wg/>.

New Charter available on Webpage

Additional details are also available in the MIRA charter [here](#).

The New MIRA Email List

Anyone can subscribe to the new MIRA email list server at this webpage: <https://espo.nasa.gov/lists/listinfo/mira>.

The list of current subscribers is available by clicking on the button near the bottom of the link (no need to enter a username or password). We have recently migrated members of our previous list (calipso_v5alr@lists.nasa.gov)

to this server because it maintains an archive of all messages at <https://espo.nasa.gov/pipermail/mira/>. We hope that this archive becomes a valuable resource over time.

We encourage subscribers to use the MIRA email list to post newsworthy items of interest to the community, such as aerosol conferences, sessions, webinars, relevant public databases, and code that are not already listed on the MIRA website.

Links to Current Projects...

- [Mapping Aerosol Lidar Ratios for CALIPSO \(MAC\)](#)
- [Tables of Aerosol Optics](#)
- [Harmonization of aerosol Assimilation Models and Retrievals \(HAMR\)](#)

... and a New Project

The MIRA webpage includes a new project:

Harmonization of aerosol Assimilation Models and Retrievals (HAMR)
Project Lead: Oleg Dubovik

The objective of HAMR is to harmonize aerosol representations connecting climate models and remote sensing. Several complementary positive outcomes can be expected from these efforts. First, climate models can certainly benefit from the experience accumulated by remote sensing for improving optical properties of aerosols. Second,

the refining of climate models relies heavily on aerosol assimilation models; therefore, aligning climate models with remote sensing may certainly affect very positively the efficiency of aerosol assimilation models. Third, the harmonization of climate models and remote sensing can significantly improve the efficiency of remote sensing approaches that attempt to use climate model data as a priori constraints. See the HAMR project on the MIRA webpage for more details: <https://science.larc.nasa.gov/mirawg/hamr/>.

Submit your Projects

If you have a multi-disciplinary project that would benefit from increased input from the aerosol community, please consider submitting your idea to the [MIRA steering committee](#) so that we can advertise your work on the MIRA webpage. The procedure for including your project as part of MIRA can be found in the [graphic](#) below.

Send us Links to your Databases

We are collecting links to databases of interest to aerosol science on the MIRA webpage (<https://science.larc.nasa.gov/mirawg/databases/>). So far we have mainly focused on aerosol refractive indices, but we plan on extending this to include other

aerosol analysis tools (e.g., optics calculations, source code, etc.) If your project has a public-facing webpage that includes data of interest to the MIRA community, send your weblinks and a one-sentence description to gregory.l.schuster@nasa.gov. Please keep in mind that we do not have a dedicated web development team, and that new material will take some time to incorporate.

Upcoming Conferences

MIRA Steering Committee members will be at the meetings listed in the [table below](#) (blue fonts in the table are hyperlinked to the meeting webpages). Please seek them out at the meetings if you have questions about MIRA. Additionally, we intend to have a side meeting at IGAC.

MIRA Session at AGU Fall Meeting

We encourage you to submit an abstract to the MIRA session at the American Geophysical Union 2022 Fall Meeting: [Session A073, Models, In situ, and Remote sensing of Aerosols \(MIRA\)](#); [linked here](#). If your research integrates multiple aerosol disciplines, this session could be a great way to connect with a group of like-minded individuals and perhaps launch a new MIRA project! Abstract deadline is August 3, 2022.

How to submit a MIRA project



- Dr. X (you) defines a multi-disciplinary project that requires data from at least 2 of the 3 MIRA disciplines (i.e., models, in situ, and remote sensing).

- Dr. X identifies an *Ask*, which is generally additional data from one of the disciplines. Note that Dr. X might not know all possible sources of the data that he/she desires.

- Dr. X submits the project description and the *Ask* to the MIRA Steering Committee.



- The MIRA Steering Committee advertises the project and the *Ask* through the MIRA webpage and email distribution.

- Dr. X advertises through MIRA meetings and MIRA special sessions (at larger meetings).

- People get excited about Dr. X's idea and gladly contribute to the project.

- Dr. X leads the research effort, interacting with colleagues to ensure proper use of the data.

- Dr. X leads the publication process with colleagues who are providing significant contributions.



<https://publicdomainvectors.org/>

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Conference	Location	Date	Who
International Rad. Symp.	Thessaloniki, Greece	July 4-8	Yang
AMS Radiation	Madison, Wisconsin	Aug 8-12	Trepte
APOLO	Silver Spring, MD	Aug 9-12	Dubovik, Schuster
IGAC	Manchester, UK	Sep 10-15	Chin, Schuster
EUMETSAT 2022	Brussels, Belgium	Sep 19-23	Dubovik, Trepte
CALIPSO Science Mtg.	Fort Collins, Colorado	Sep 12-15	Trepte
AeroCom ¹	Oslo, Norway	Oct 10-14	Chin, Schuster
ICAP	Monterey, CA	Oct 17-21	Trepte
AGU ¹ , MIRA Session ²	Chicago, IL	Dec 12-16	Dubovik, Schuster, Trepte
AMS Annual Meeting ¹	Denver, Colorado	Jan 8-12, 2023	To be determined
Asia Oceania Geosci. Soc.	Singapore	Jul 30, 2023	To be determined

¹Accepting abstracts.

²Chaired by Greg Schuster, Oleg Dubovik, Meloë Kacenelenbogen, and Carlos Pérez García-Pando.

MIRA Steering Committee

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Ping Yang	Texas A&M University, USA	

About our Logo. Our logo was created by Amiee Amin of the LaRC Science Directorate Communications Team. It is a Venn diagram with four overlapping circles. Three of the circles represent the MIRA aerosol science specialties – modeling, in situ, and remote sensing. The fourth circle is our common topic of study, the planet Earth. MIRA is at the intersection of the circles. The human silhouettes represent the working connections that bring the different aerosol specialties together.