

Aerosol(and Cloud) Passive Remote Sensing

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Session 1 (Tuesday 23 July):

Survey of what's out there. Hands-on access to aerosol and cloud satellite products and web-based visualization tools.

Session 2 (Thursday 25 July):

Focus on aerosol retrievals from MODIS and VIIRS. Theoretical bases. Which product do I use?

Session 3 (Tuesday 30 July)

Hands-on exercise in building a Look Up Table. Leading to developing an intuitive sense of how aerosol properties affect the signal that satellites measure at the top of the atmosphere.

Session 4 (Tuesday 30 July)

Nitty gritty details of an algorithm that affect the final product, like cloud masking and assumptions. User beware!

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Session 1: Survey of what's out there.

Web sites visualization.

Web sites for data access.

NOAA, NASA, USGS, CNES,

Platform: Terra, Aqua, Aura, PARASOL, S-NPP, Landsat, NOAA-20, GOES-East, GOES-West, Himawari, NASA ER-2

Instrument: MODIS, MISR, ASTER, CERES, POLDER, OMI, OLI, VIIRS, OMPS, ABI, AHI

Product: NASA VIIRS AOD vs. NOAA VIIRS AOD

NOAA VIIRS ADP vs. NOAA VIIRS AOD

NASA Dark Target vs. NASA Deep Blue vs. NASA MAIAC, all on MODIS

OMI AOD vs. OMI UVAI

OMAERUV vs. OMAERO

Visualization

An interesting new starting point from NASA

<https://earthdata.nasa.gov>

The “best” global visualization site for polar orbiting platforms

<https://worldview.earthdata.nasa.gov>

NOAA’s excellent answer to Worldview

<https://www.star.nesdis.noaa.gov/jpss/mapper/>

NASA’s infamous Giovanni site

<https://giovanni.gsfc.nasa.gov/giovanni/>

NOAA’s absolutely awesome visualization of GOES

<https://www.star.nesdis.noaa.gov/smcd/spb/aq/AerosolWatch/>

Data Access

MODIS aerosol and cloud products (NASA)

<https://ladsweb.modaps.eosdis.nasa.gov>

MISR aerosol and cloud products (NASA)

<https://eosweb.larc.nasa.gov>

NOAA VIIRS aerosol products

<https://www.avl.class.noaa.gov/saa/products/welcome>

NASA VIIRS aerosol products

<https://earthdata.nasa.gov/search?q=VIIRS+aerosol>

OMI aerosol products (NASA)

<https://disc.gsfc.nasa.gov/datasets?page=1&subject=Aerosols&source=Aura%20OMI>

PARASOL/POLDER products (LOA)

<http://www.icare.univ-lille1.fr/parasol/overview/>

Landsat data images (not aerosol) (USGS)

<https://earthexplorer.usgs.gov>

Here are the links to MAIAC data:

For bulk download, please go to:

<https://e4ftl01.cr.usgs.gov/MOTA/>

for Data search and ordering: (please note you do need register an account to access the data)

<https://search.earthdata.nasa.gov/search?q=MCD19&ok=MCD19>

And our internal processed MAIAC data is located at:

<https://portal.nccs.nasa.gov/datashare/maiac/DataRelease/>