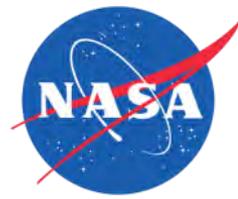




# Status of MODIS MAIAC (MCD19)



## Status and Updates:

- MODIS MAIAC AOD was one of 3 NASA selected products (with MODIS VI and OMI NO2) for the international COVID-19 Space Apps Challenge held May 30-31, 2020
- MAIAC is in EarthView

## MCD19 Product Suite:

### Collection 6: (Released May 2018)

- MCD19 A1: Surface reflectance (1km, 0.5km)
- MCD19A2: AOD, WV, Smoke Injection Height (1km)
- MCD19A3 8-day BRDF/albedo (1km)

### Collection 6.1: (science version completed)

- Adding: Daily global gap-filled NDVI (1km), and composite SR (0.25km)
- Adding: Daily 0.05 degree Climate Modeling Grid (CMG)

## Selected Improvements in C6.1:

- Mitigated low AOD bias for biomass burning regions globally and dust (west Sahara)
- Improved aerosol retrieval and AC in coastal regions, including turbid waters
- *Developed de-stripping model for residual polarization of MODIS Terra affecting B3, B8 (particularly at high latitudes)*

## Selected Recent Publications:

- Lyapustin, A., Zhao, F., Y. Wang: Evaluation of MODIS Multi-Angle Implementation of Atmospheric Correction (MAIAC) Daily Surface Reflectance Product, in review, 2020.
- Sogacheva et al., (2020), Merging regional and global AOD records from 15 available satellite products”, *Atm. Chem. Phys.* 20, 2031–2056, doi.org/10.5194/acp-20-2031-2020.
- Hammer et al., Global Estimates and Long-Term Trends of Fine Particulate Matter Concentrations (1998-2018), *Environ. Sci. Technol.*, doi: 10.1021/acs.est.0c01764, 2020.
- Lyapustin, A. I., Y. Wang, S. Korkin, R. Kahn, D. Winker, MAIAC Thermal Technique for Smoke Injection Height from MODIS, *IEEE Geosci. and Rem. Sensing Letters*, 17 (5), 730-734, 2020, doi: 10.1109/LGRS.2019.2936332.
- Zhdanova, E. Y., Chubarova, N. Y., and Lyapustin, A. I.: Assessment of urban aerosol pollution over the Moscow megacity by the MAIAC aerosol product, *Atmos. Meas. Tech.*, 13, 877–891, https://doi.org/10.5194/amt-13-877-2020, 2020

