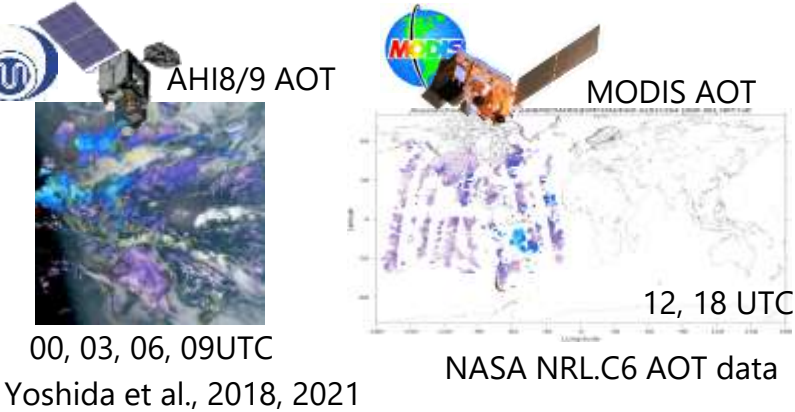
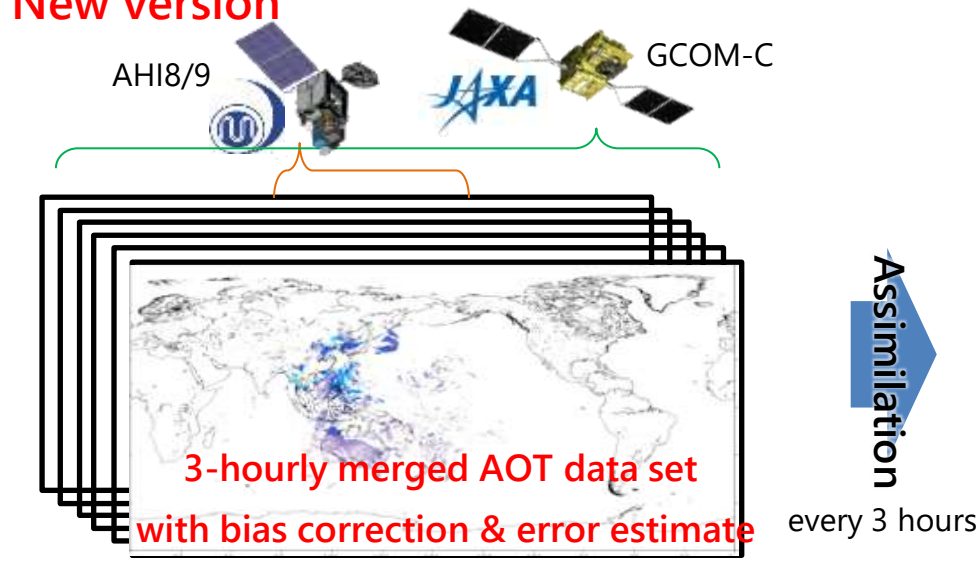


Update of JAXA Himawari Monitor model assimilated aerosol data Oct. 1 2026

Previous version



New version



*1 Merged data DOI: 10.57746/EO.01jjxj56qzh2meyqdw683yp0f

✓ Major update: AHI-SGLI merged data*1 is used for model assimilation→Satellite AOT data are more effectively assimilated, especially improve bias of model results

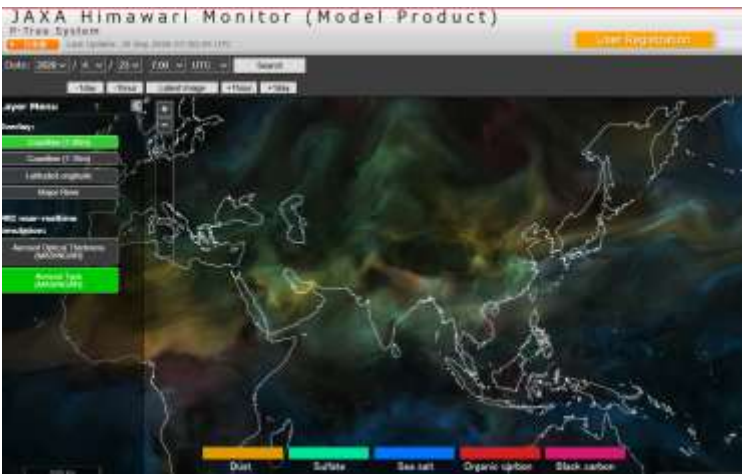
Hourly aerosol optical thickness (AOT) of 5 types

Aerosol transport model

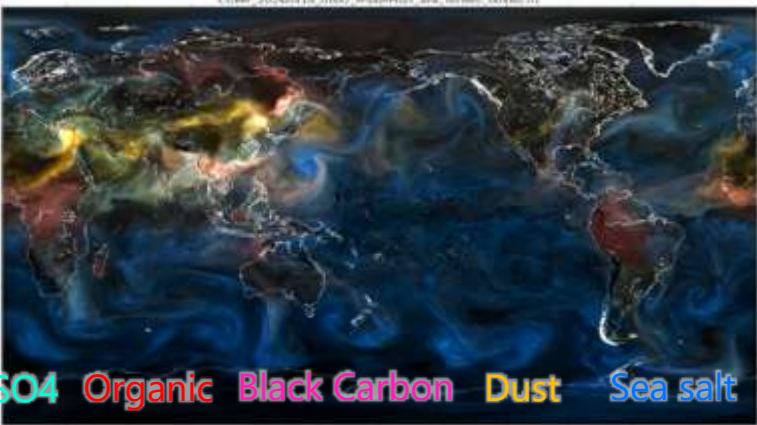
MASINGAR:
Model of Aerosol Species IN the Global AtmospheRe, (Tanaka et al., 2003)

Yumimoto et al., 2017, 2018

Analysis & prediction



Analysis & prediction



An example from 18 to 23 April 2026
JAXA Himawari Monitor:
https://www.eorc.jaxa.jp/ptree/aerosol_model/

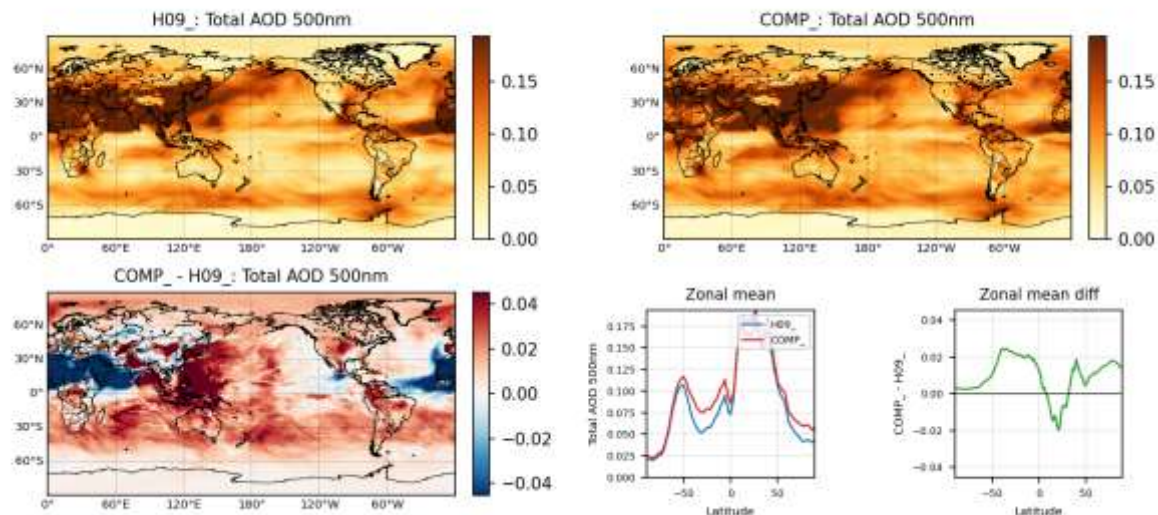
Comparison between previous and new assimilated data (April 2026)

Total aerosol optical thickness (AOT in April 2026)

Previous version

od500aer (global)

New version

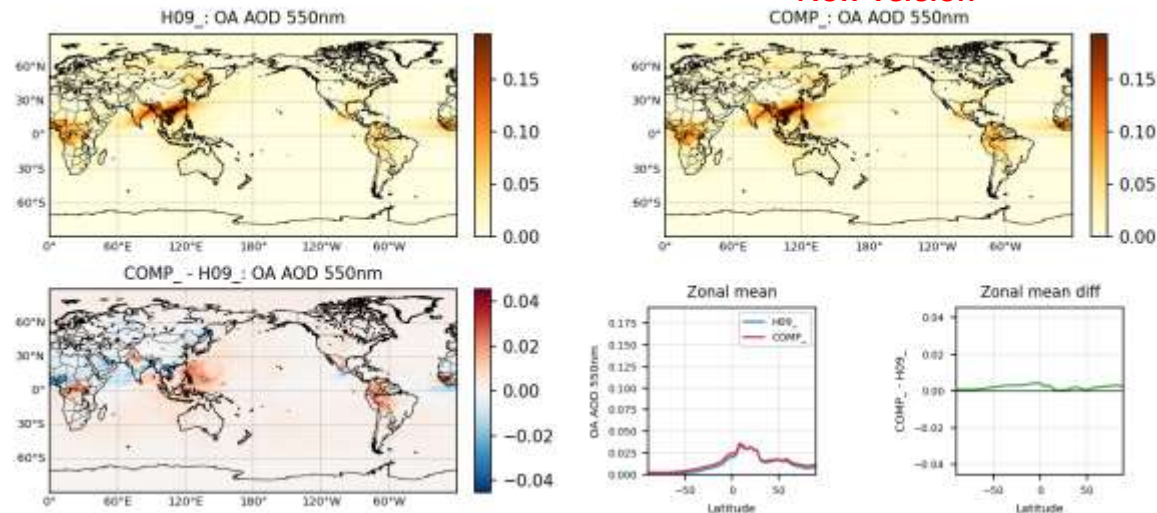


Organic aerosol optical thickness

od550oa (global)

Previous version

New version

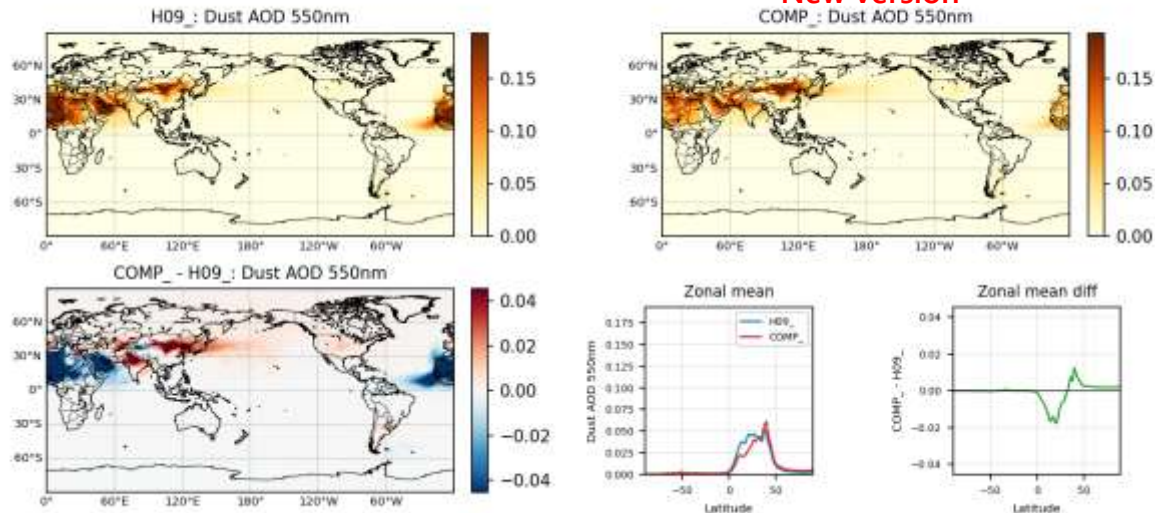


Dust type aerosol optical thickness

od550dust (global)

Previous version

New version

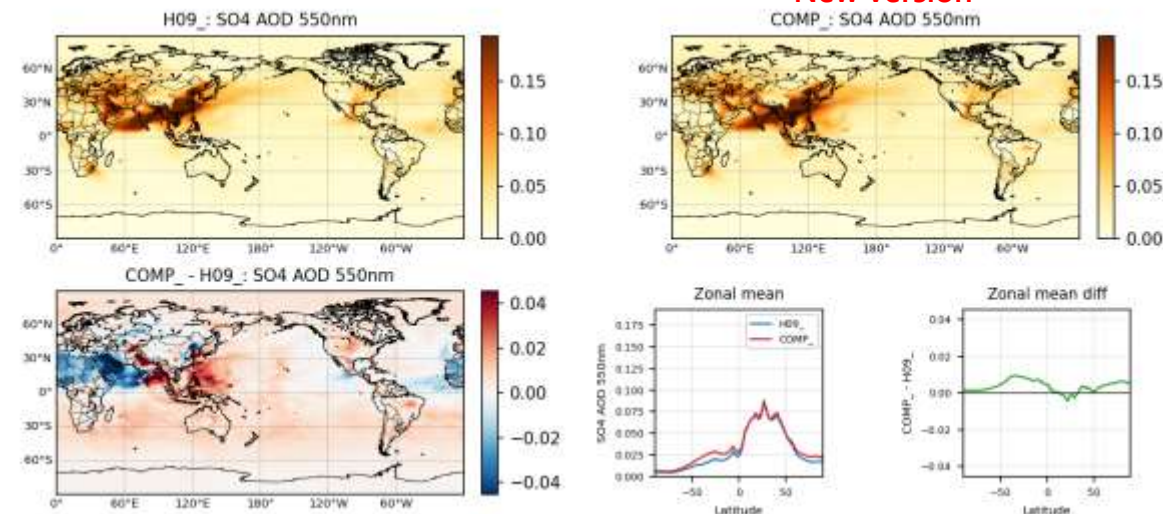


Sulfate aerosol optical thickness

od550so4 (global)

Previous version

New version



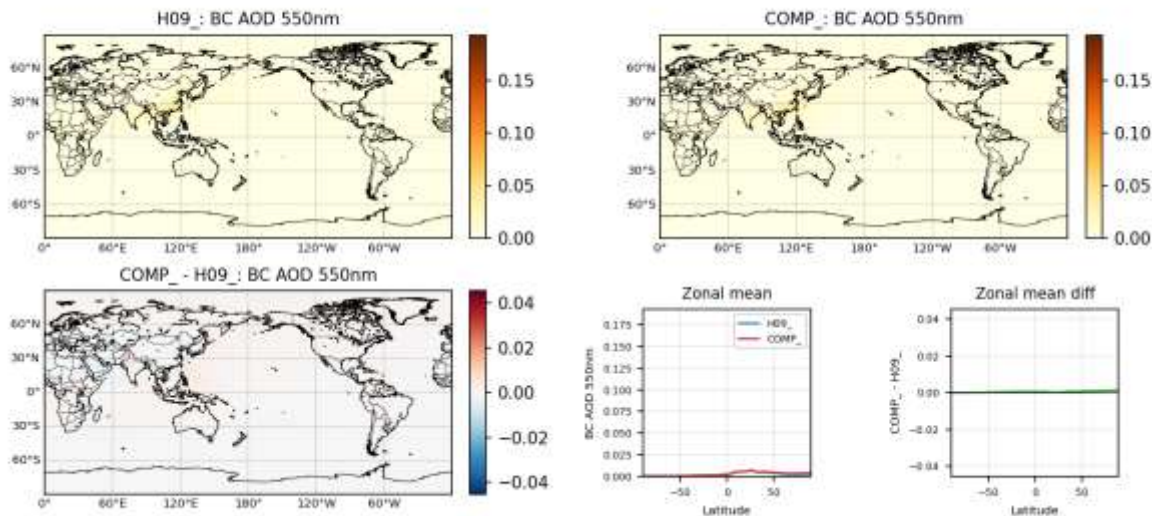
Comparison between previous and new assimilated data (April 2026)

Black carbon aerosol optical thickness

od550bc (global)

Previous version

New version

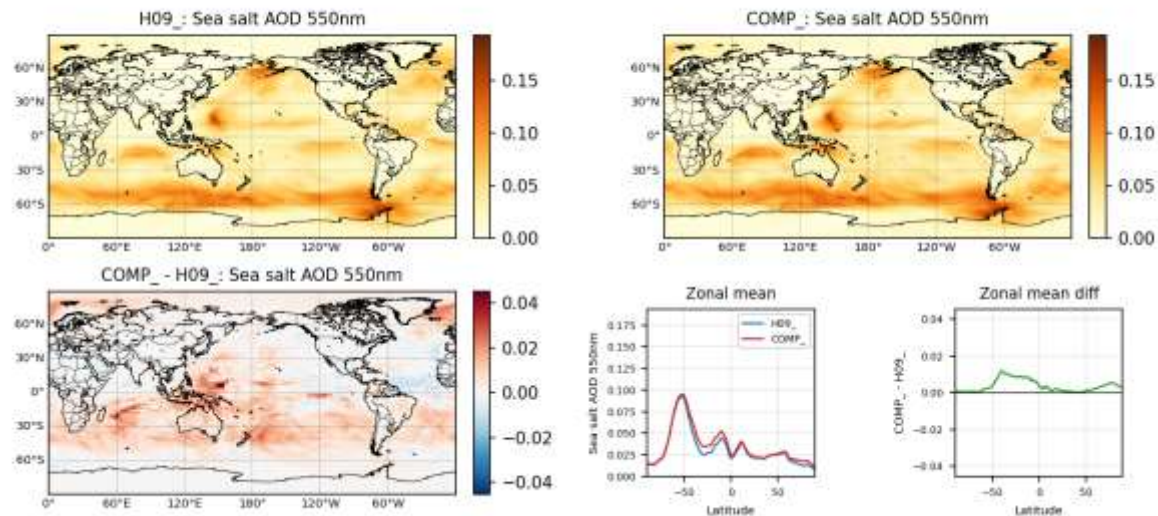


Sea salt aerosol optical thickness

od550ss (global)

Previous version

New version

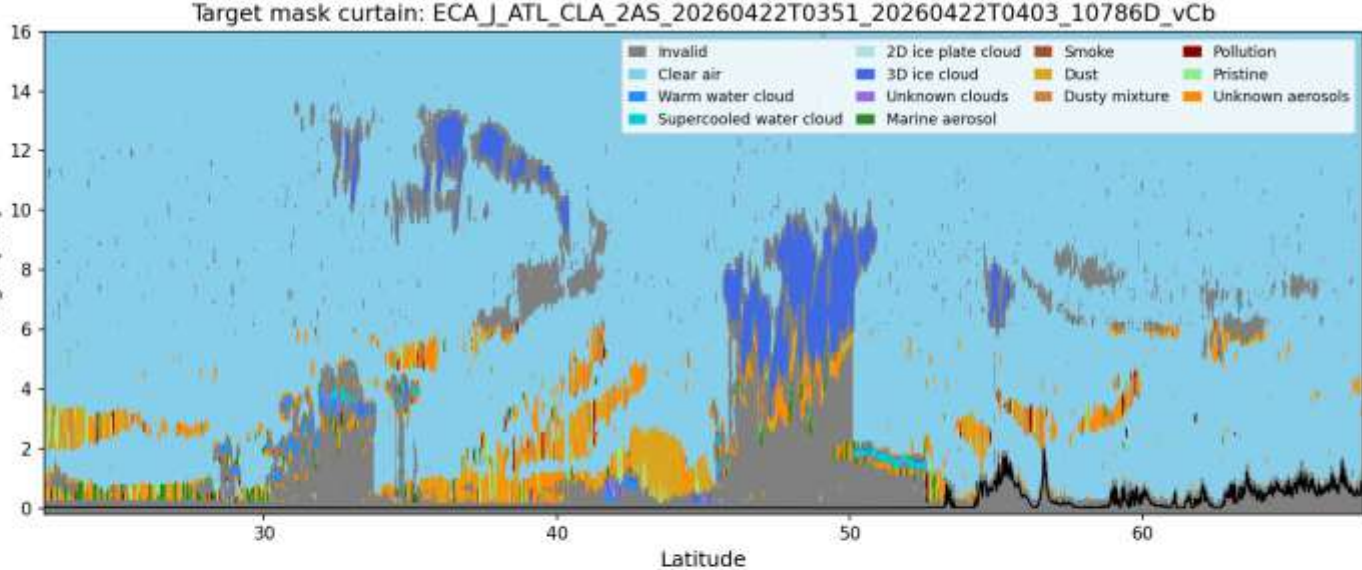
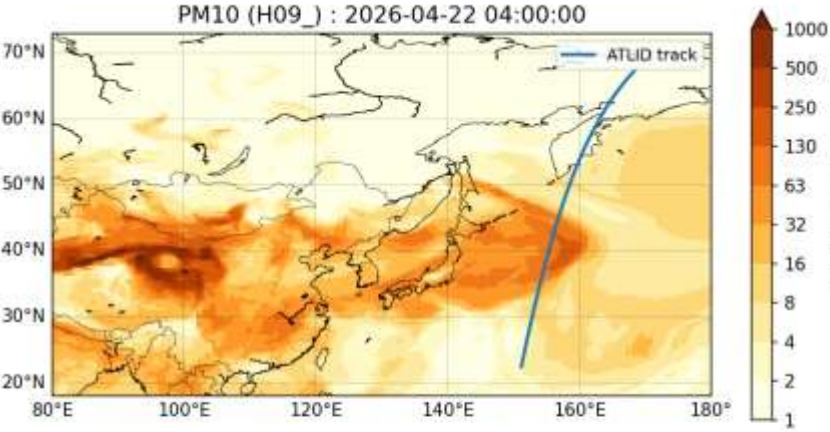


Analyzed by M. Muto JAXA/EORC

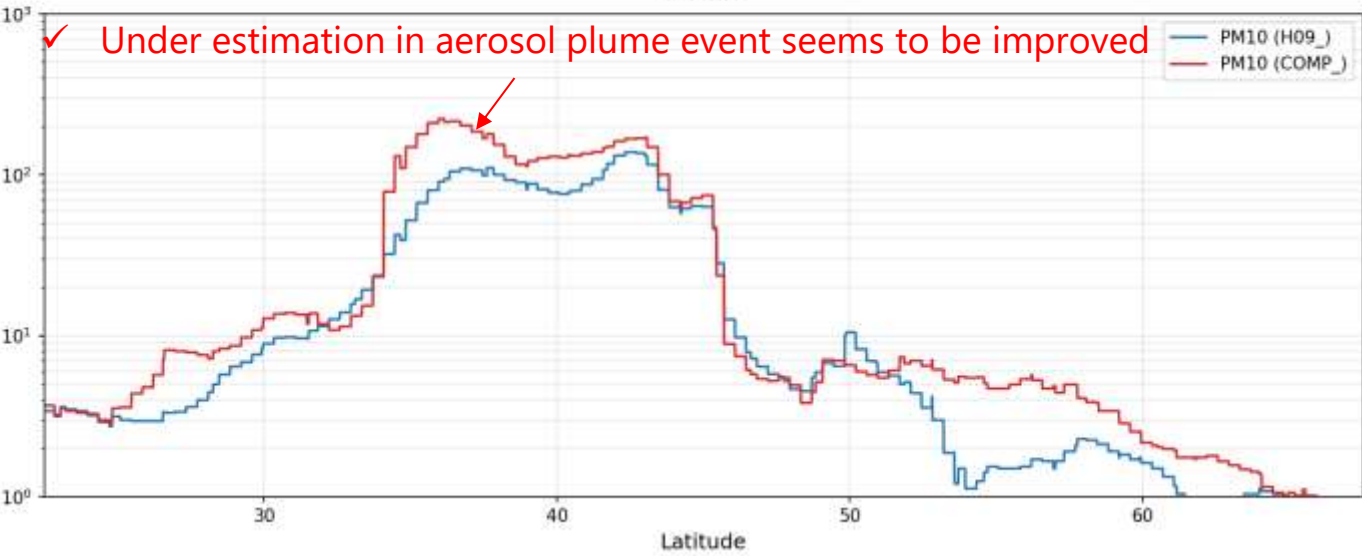
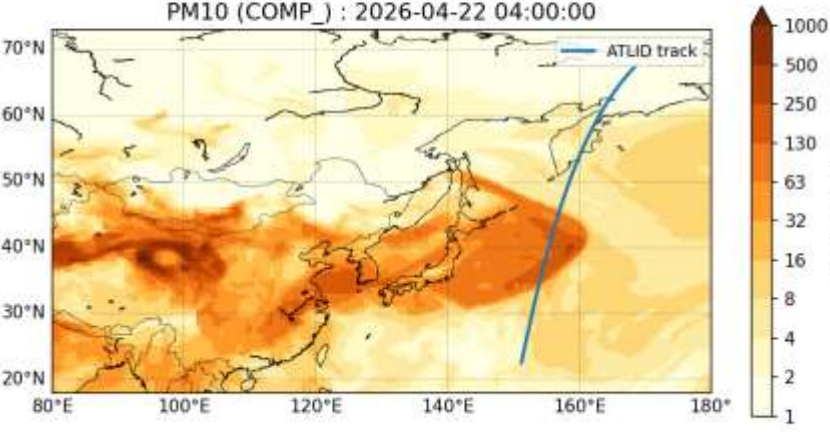
Comparison between model assimilated PM10 and ATLID observation

EarthCARE ATLID Target Mask

Previous version



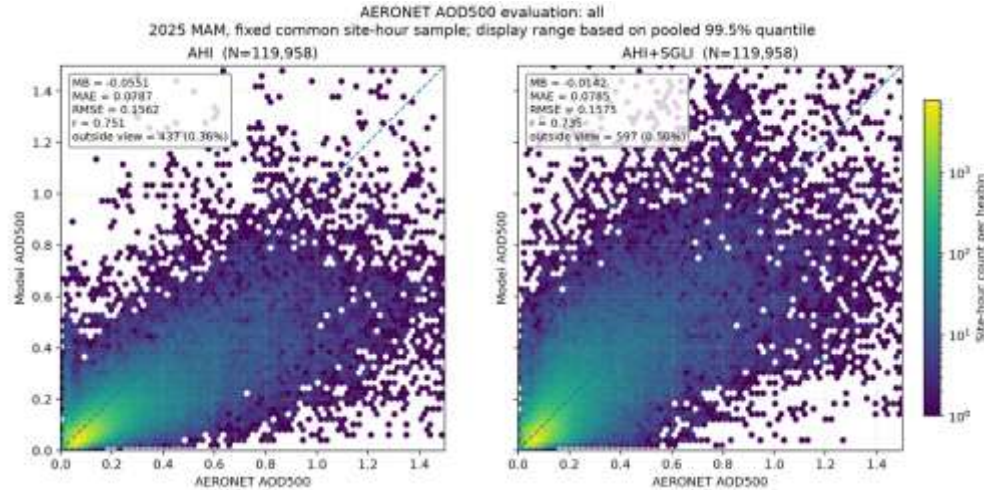
New version



Validation of new assimilation outputs by AERONET

ALL area

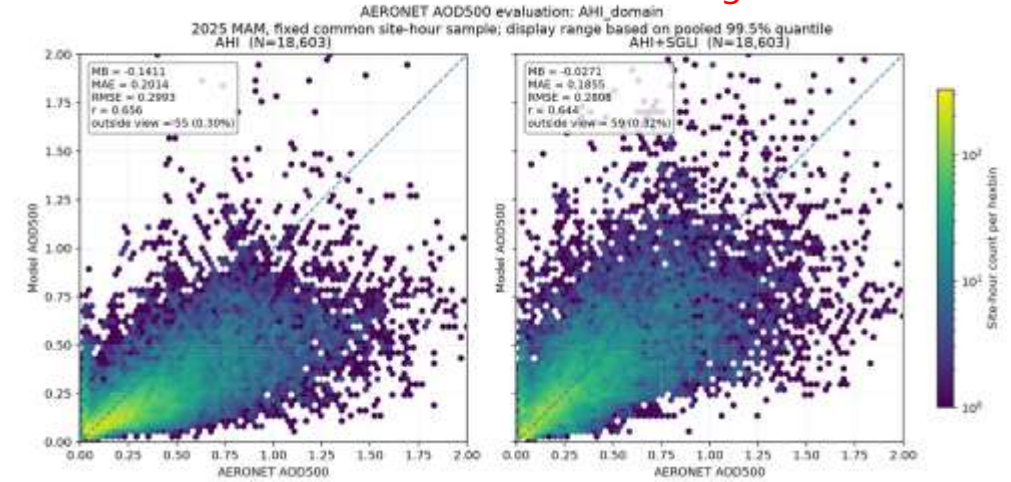
AHI+MODIS assimilation AHI+SGLI merged data assimilation



✓ Especially bias has improved

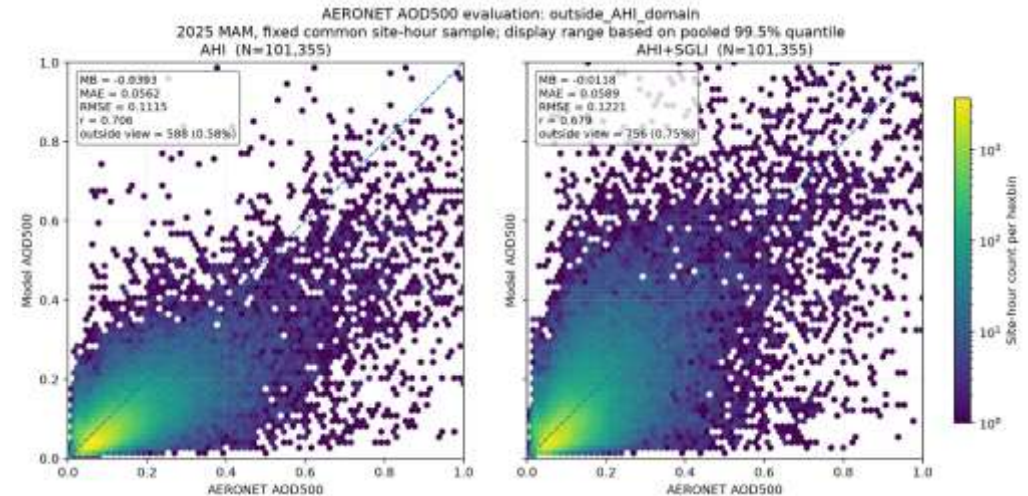
Himawari area

AHI+MODIS assimilation AHI+SGLI merged data assimilation

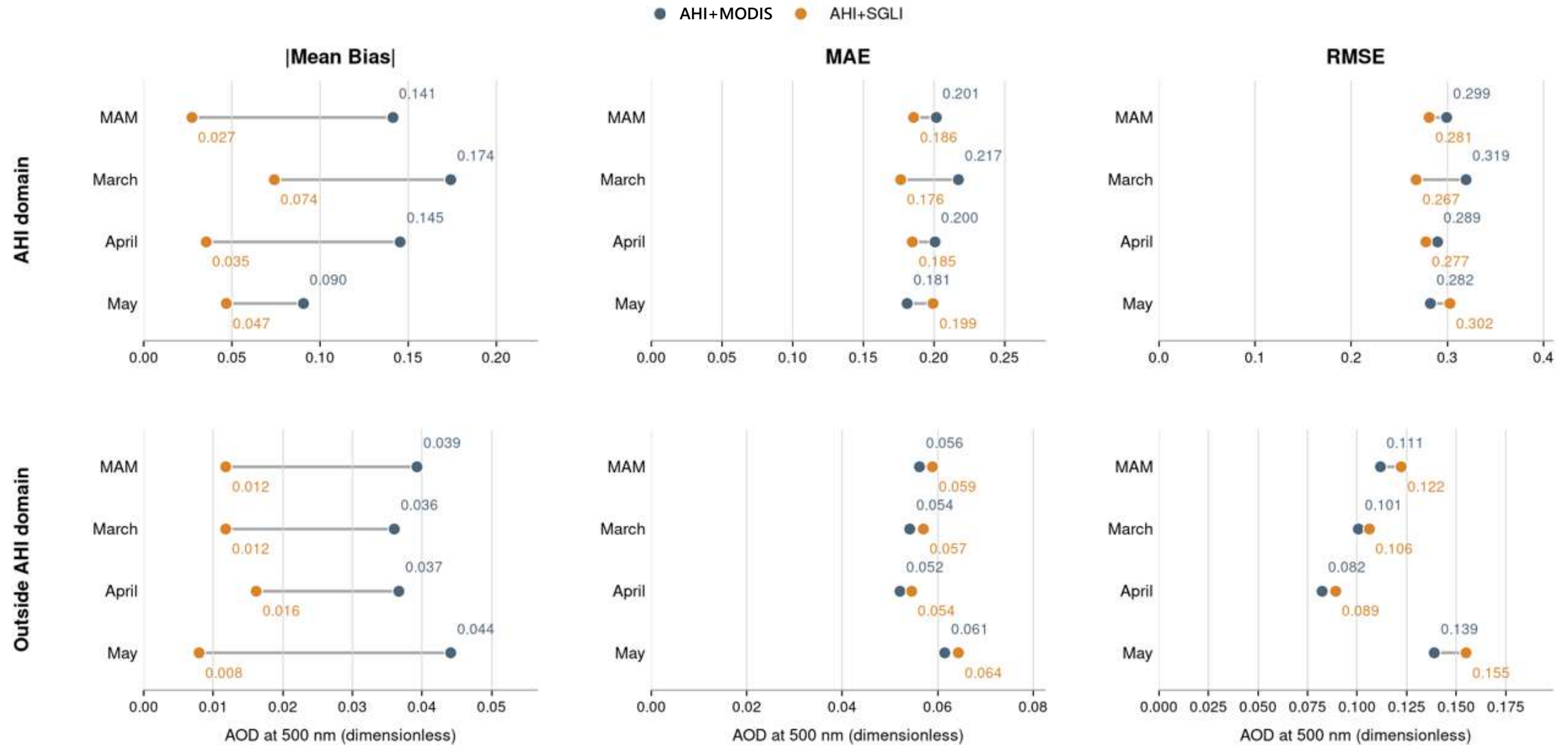


Outside of Himawari area

AHI+MODIS assimilation AHI+SGLI merged data assimilation



Validation of new assimilation outputs by AERONET



Smaller is better. Common site-hours; sites with more observations have greater weight.
 Axis limits differ between panels; compare values, not marker positions, across regions.