

Applications for Societal Benefits from Atmospheric PACE Products

Air Quality

Aerosol properties

Aerosol Optical Depth OCI Only

Aerosol Size Distribution – Fine Fraction /Coarse Fraction

Aerosol type Dust, Smoke MAP

Aerosol layer height – OCI (O₂ A Band), OCI, MAP

Aerosol absorption from UV similar to OMI

Trace gases – Ozone, NO₂ [Column measurements need to be translated to surface]

Volcanic Ash Advisories – OCI, MAP

Solar Energy Availability for Renewable Energy – from the Cloud Products

Stratospheric aerosol concentration(SWIR, MAP)

Limb scattering with MAP for ash concentrations

Assimilation of Radiances for Weather Forecasting (NCEP, NWS, NRL, ECMWF)

Trace gases – water vapor for humidity studies for aerosol modelling studies and air quality forecasting, visibility (need to translate to ground level conc)