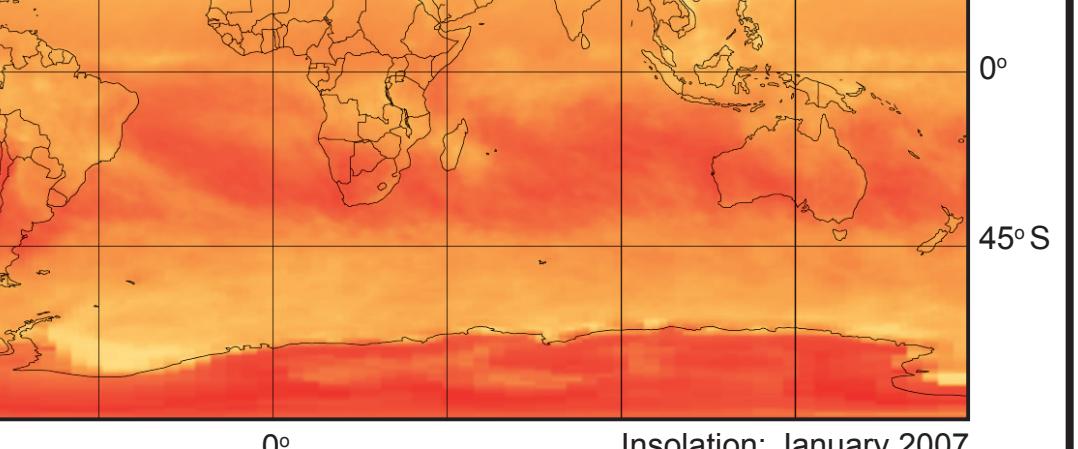
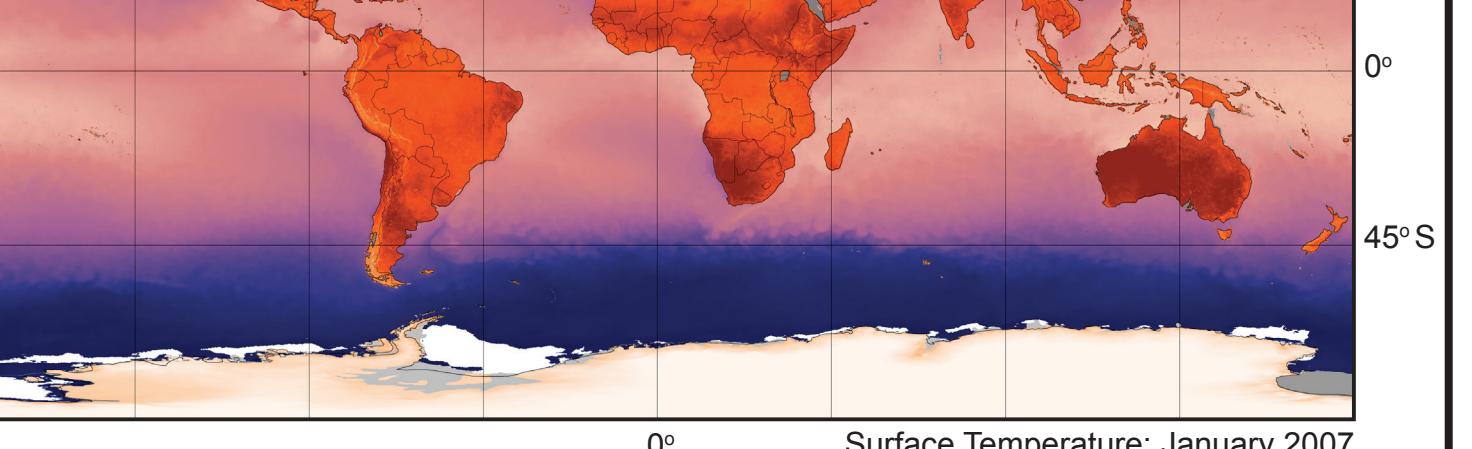
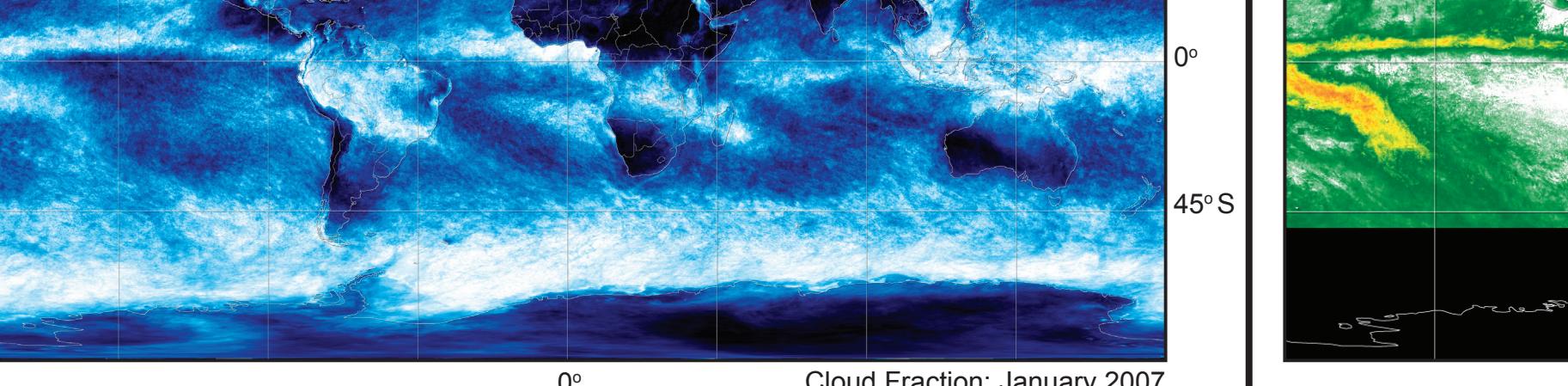
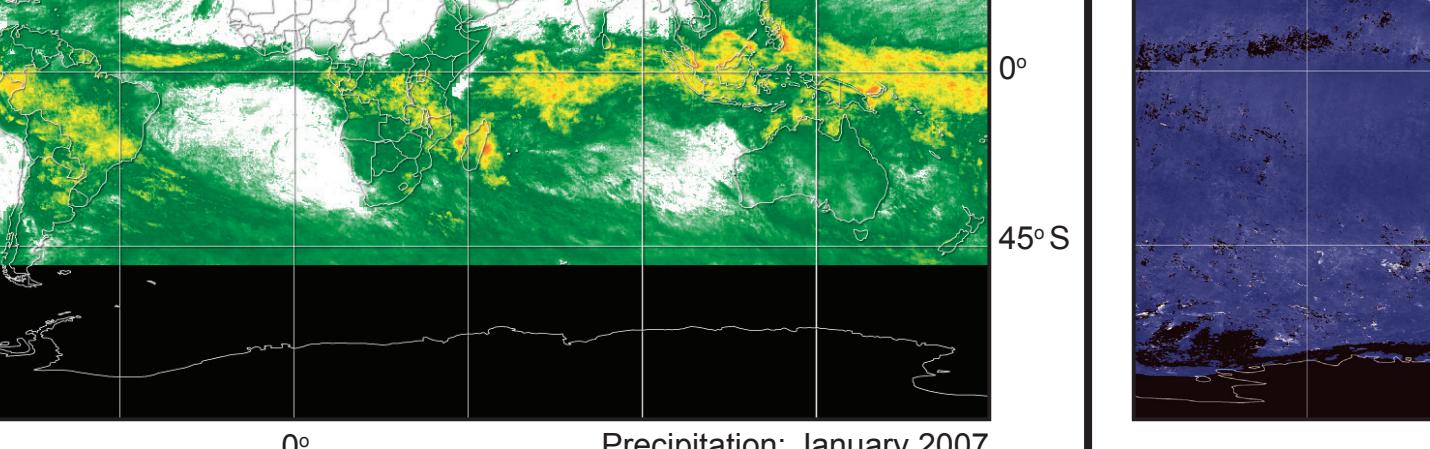
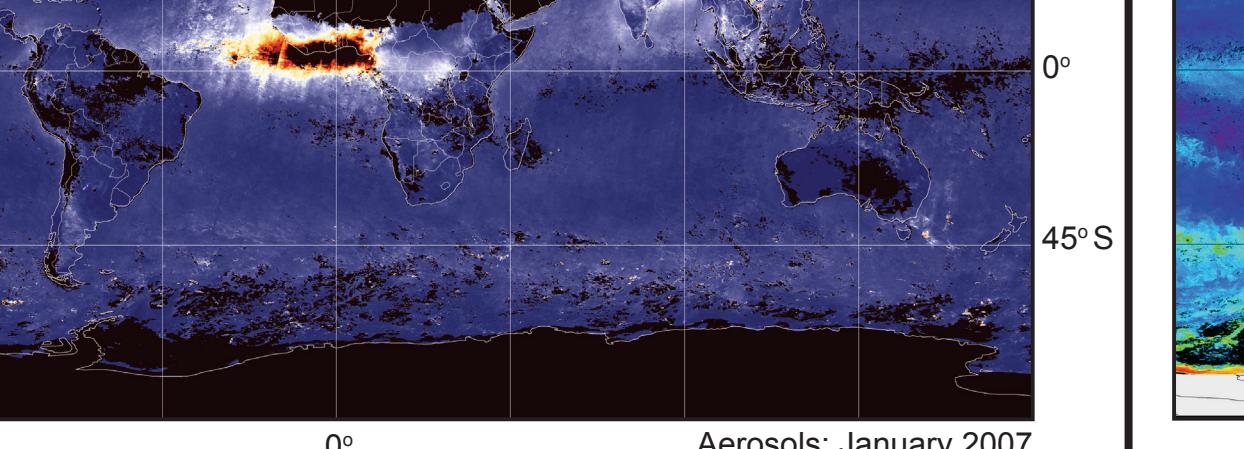
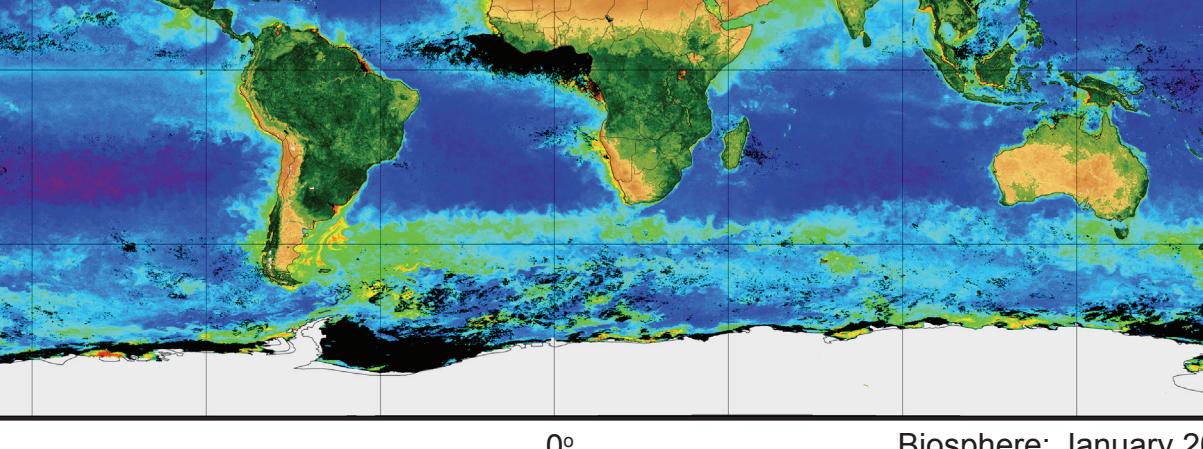
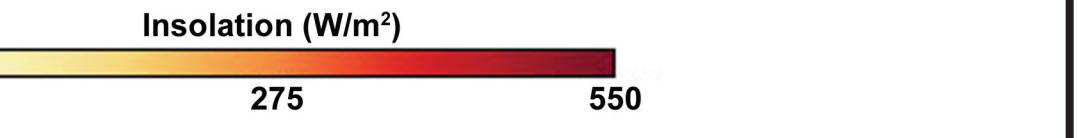
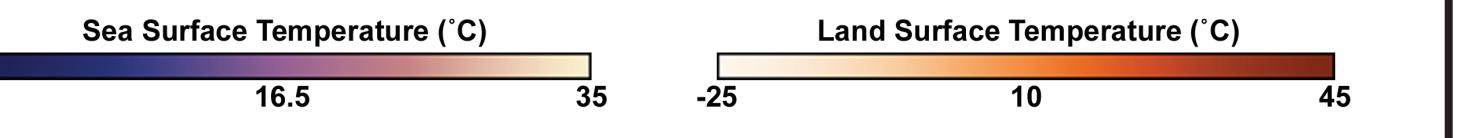
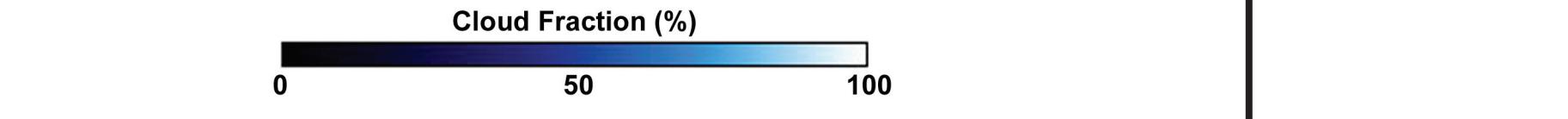
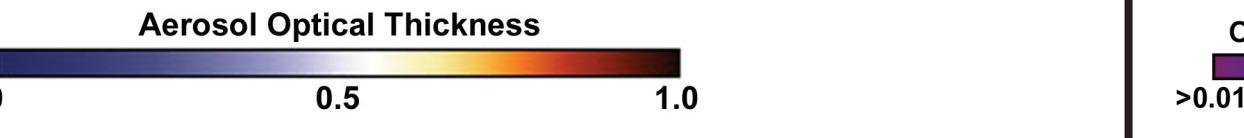
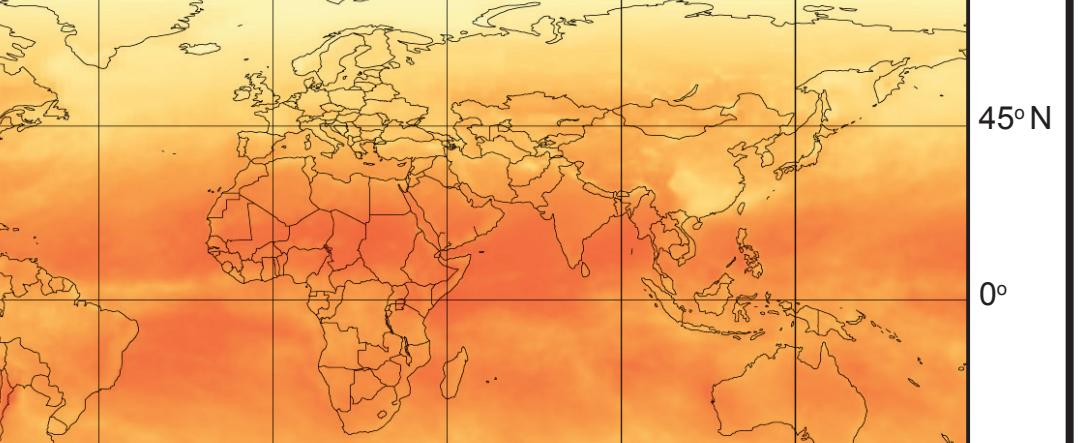
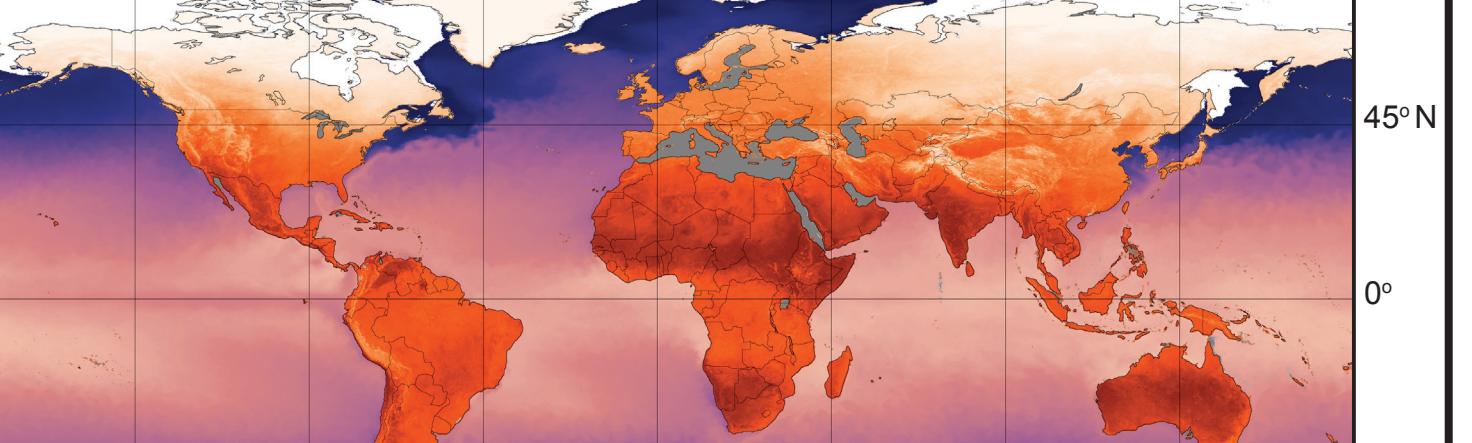
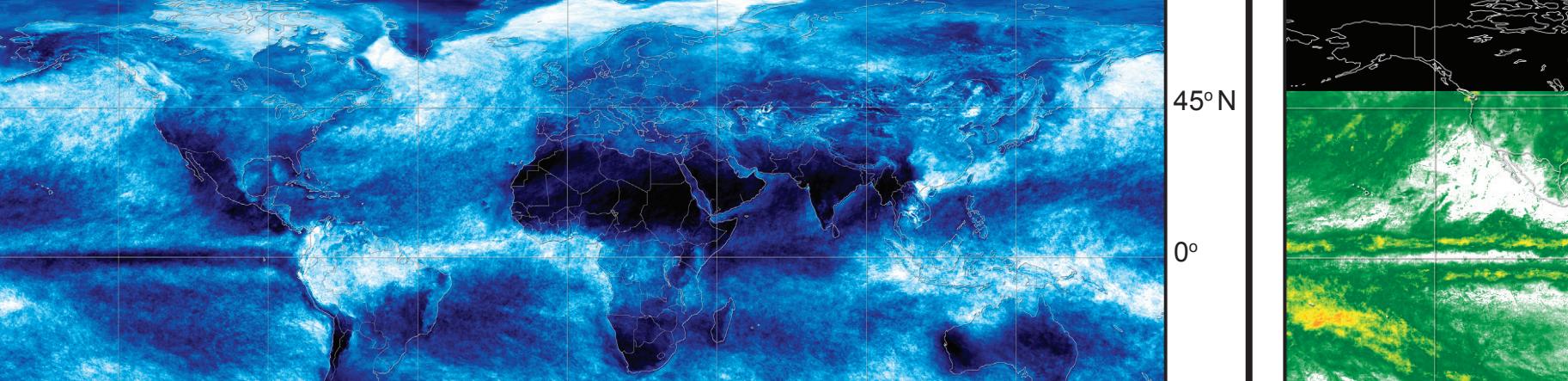
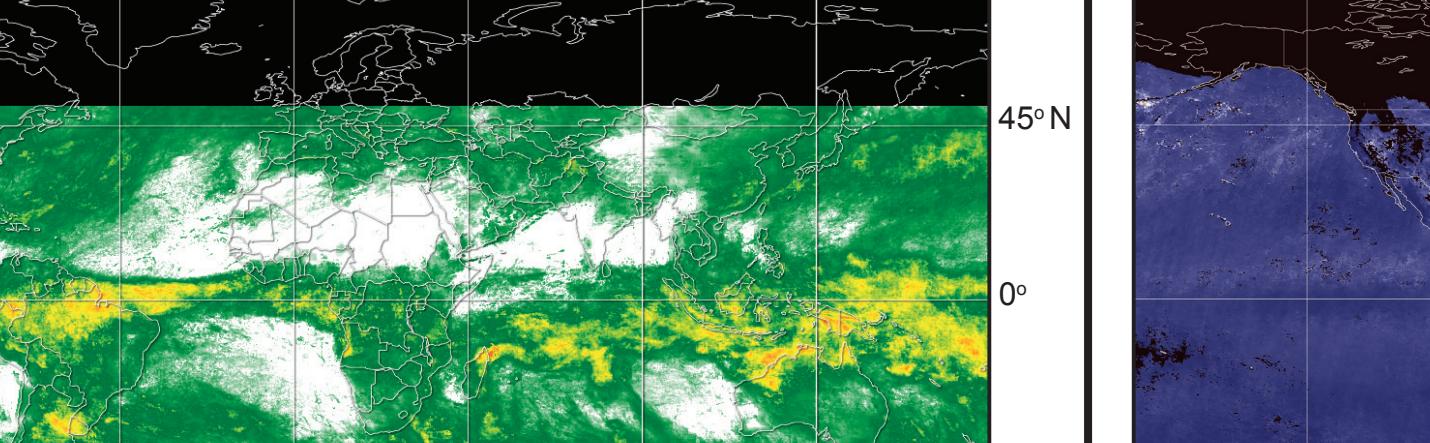
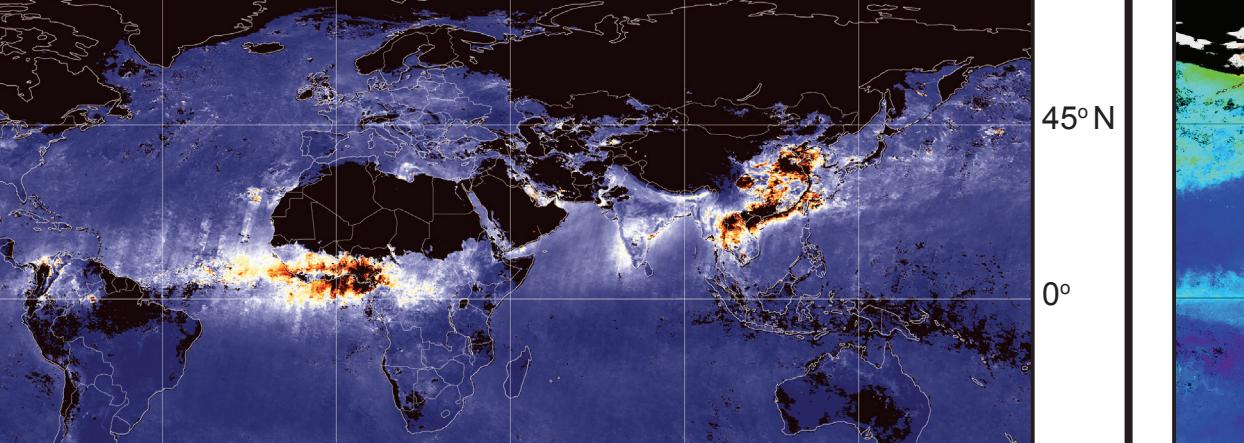
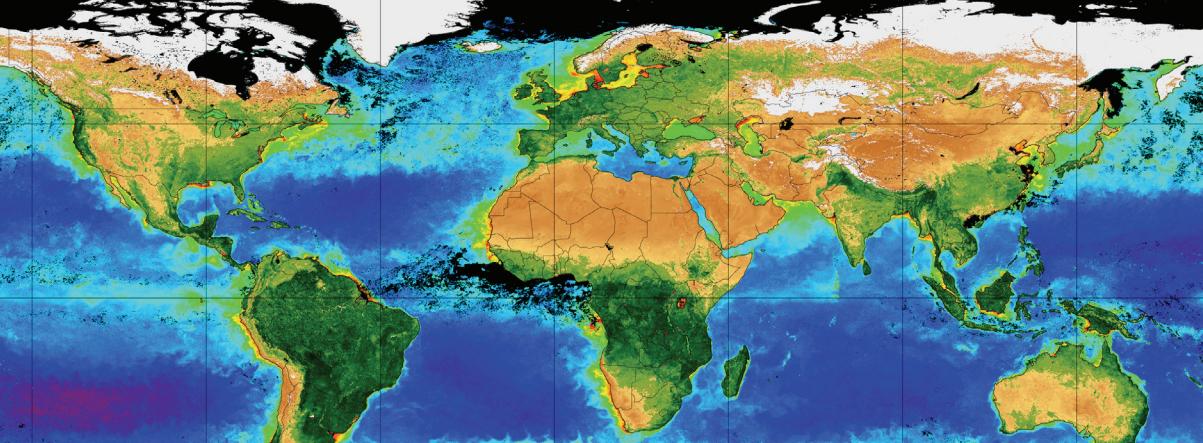
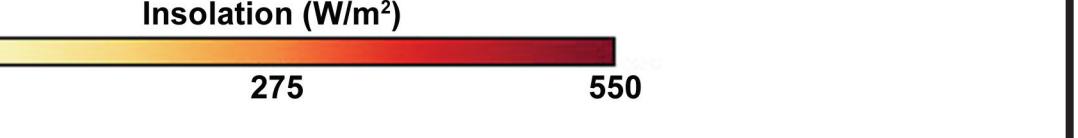
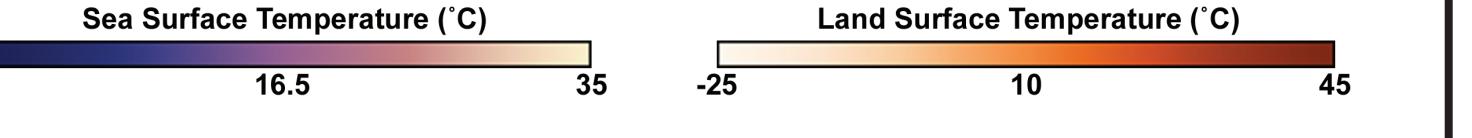
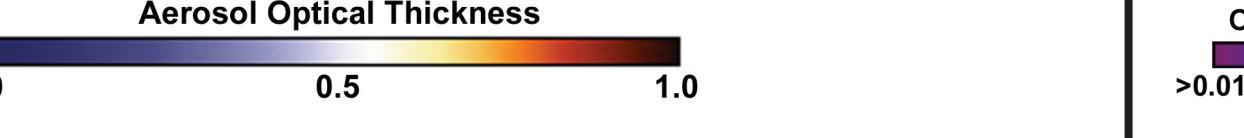
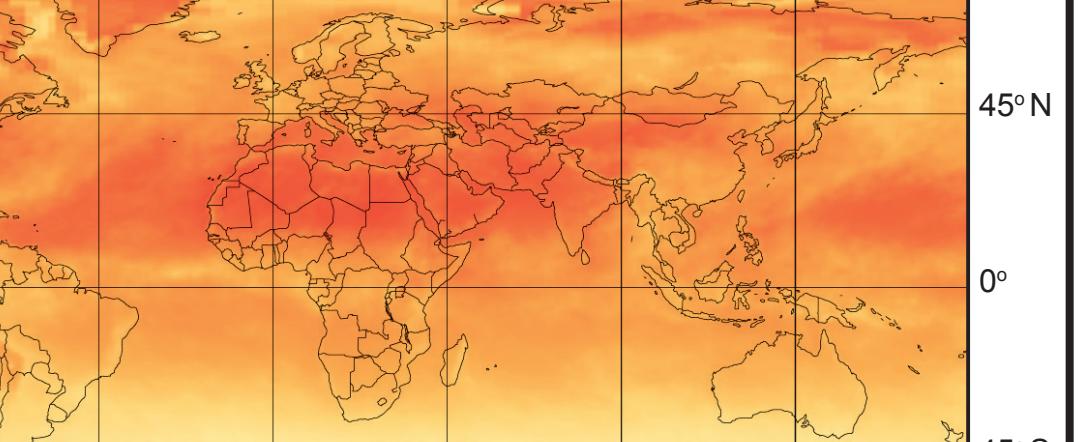
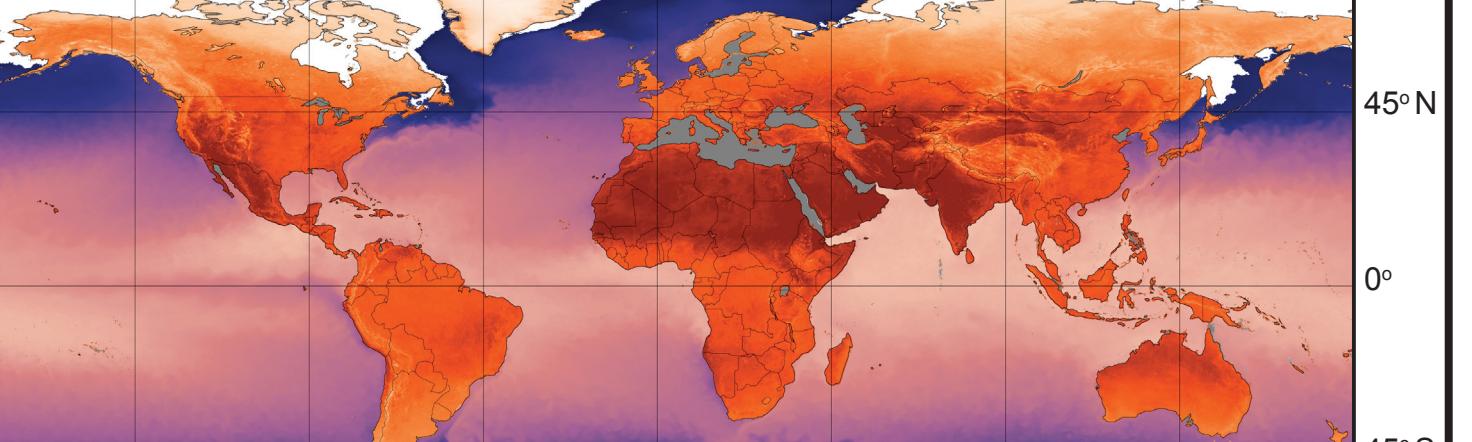
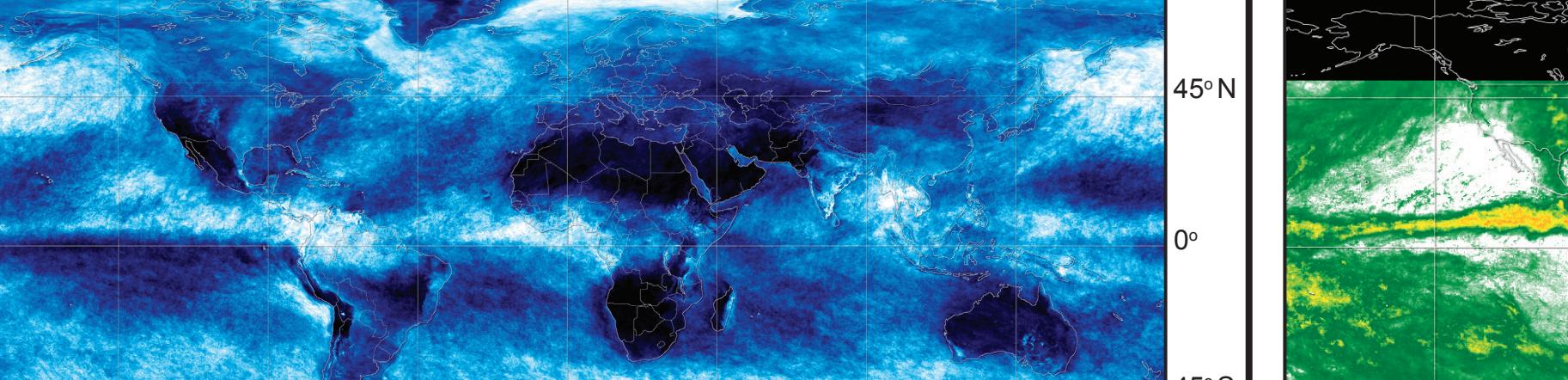
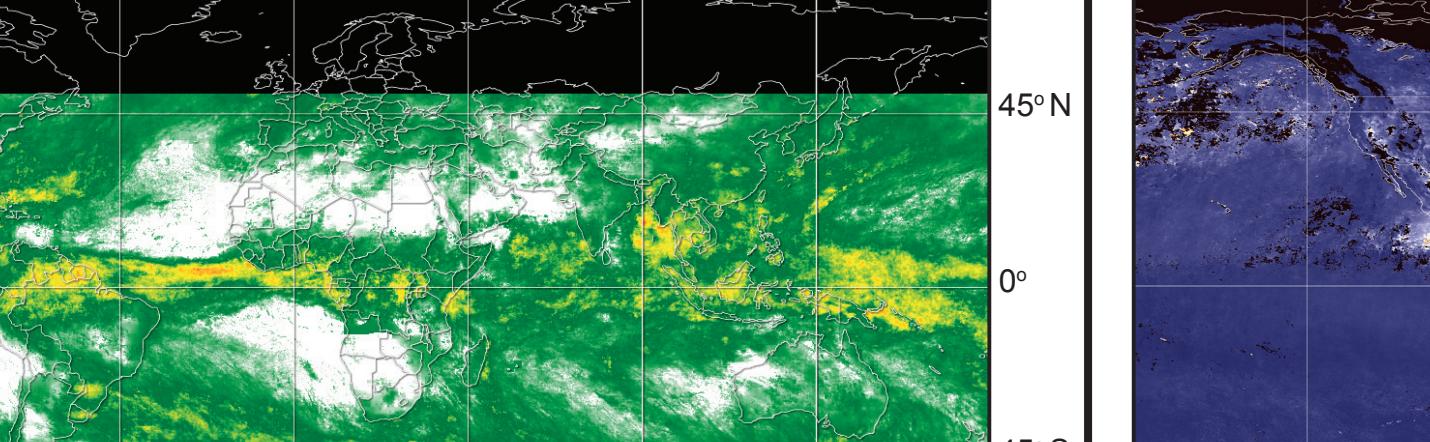
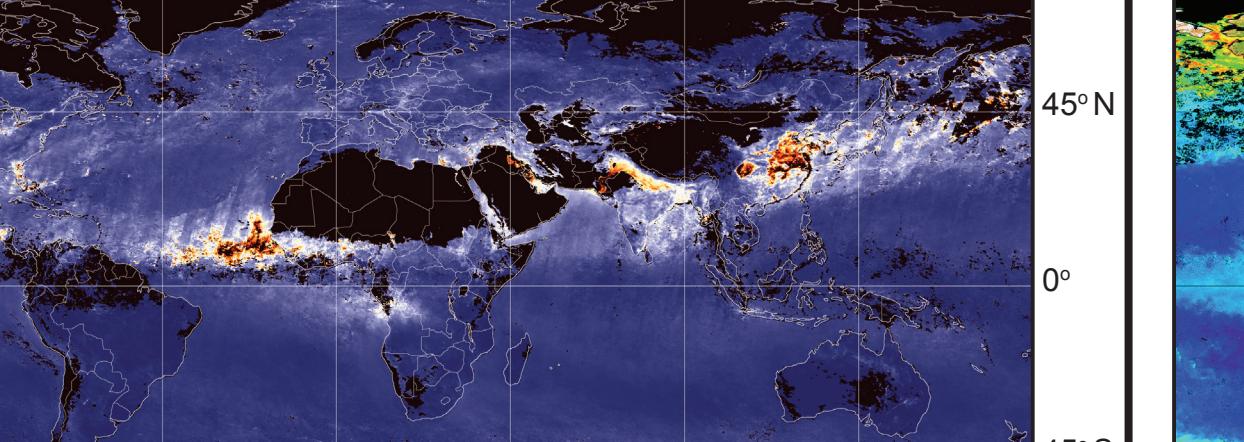
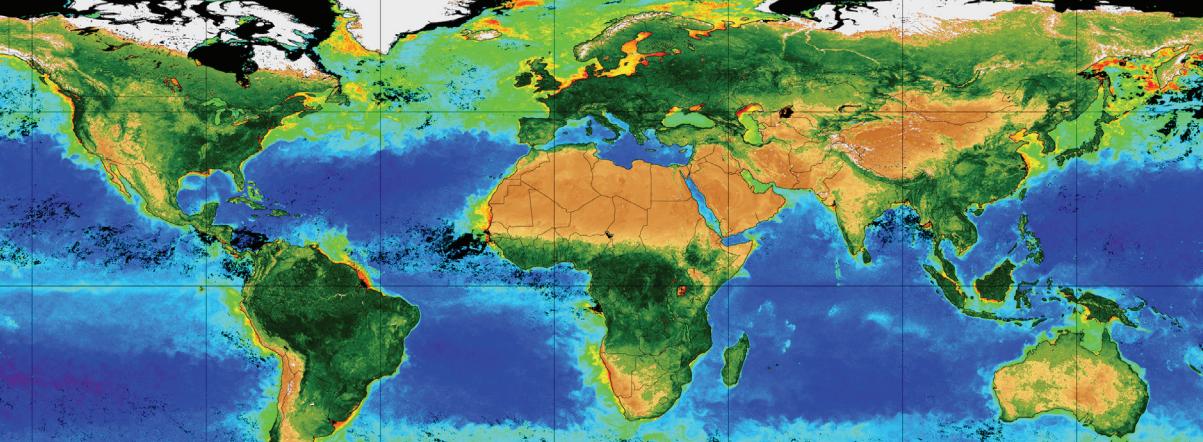
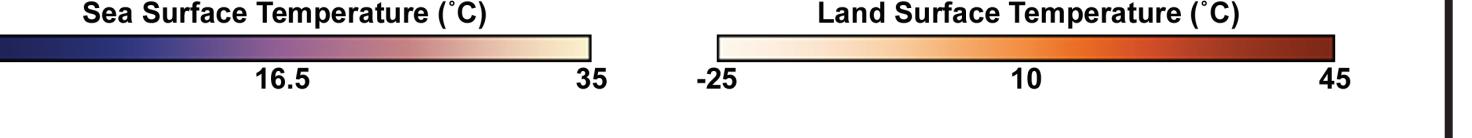
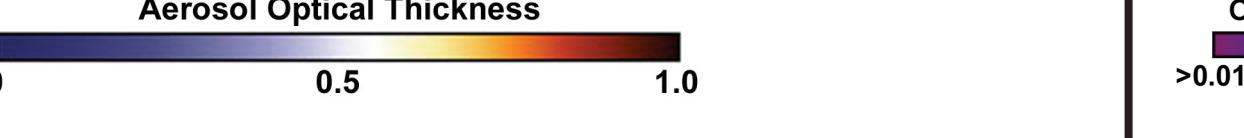
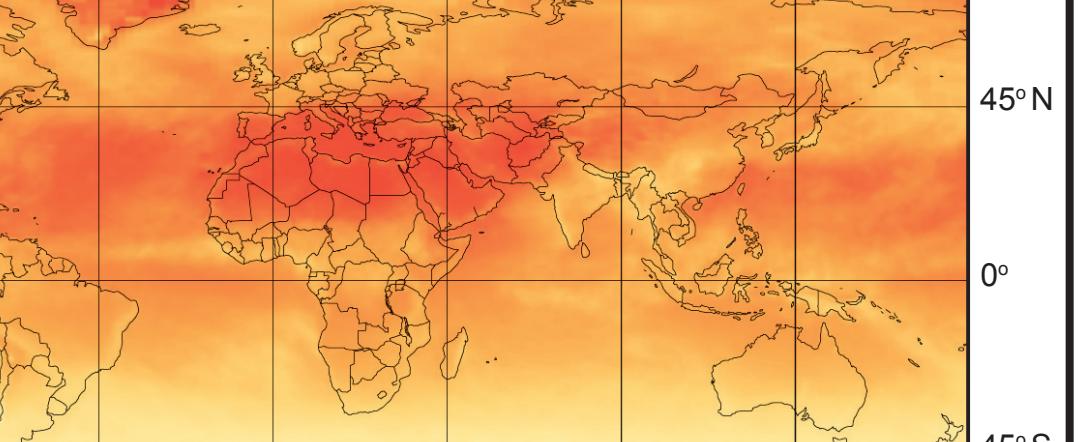
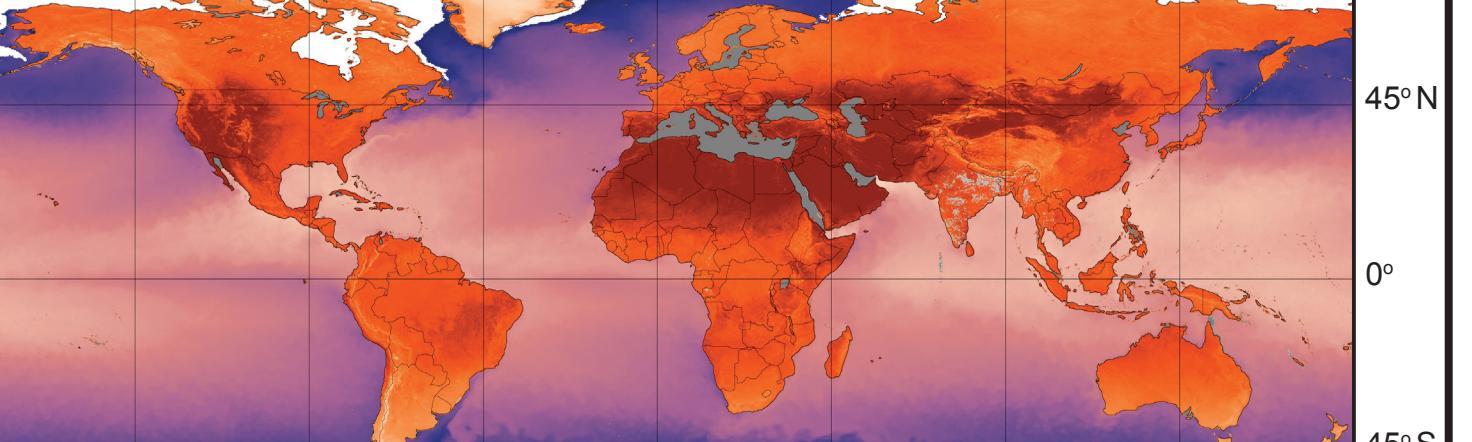
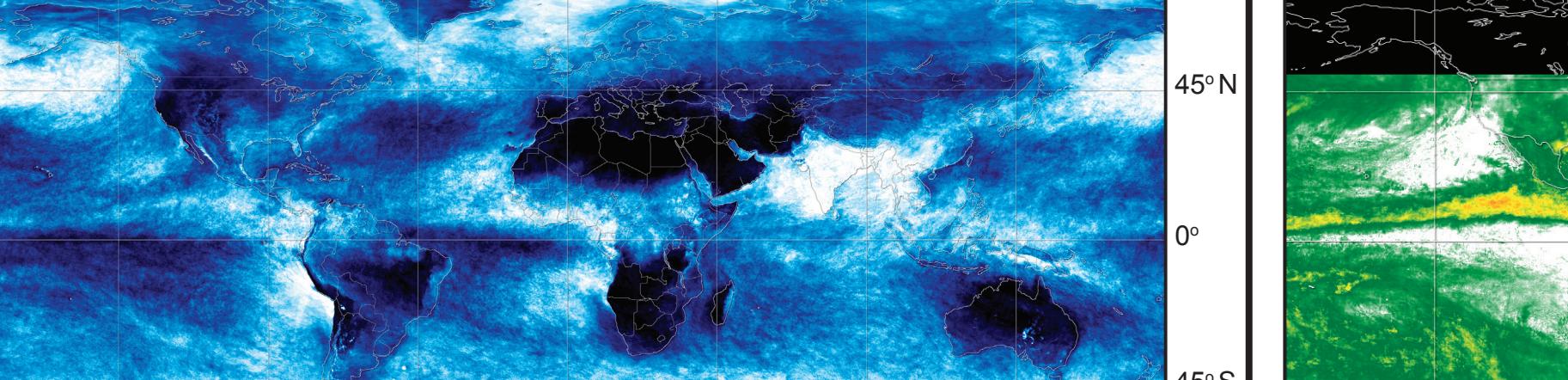
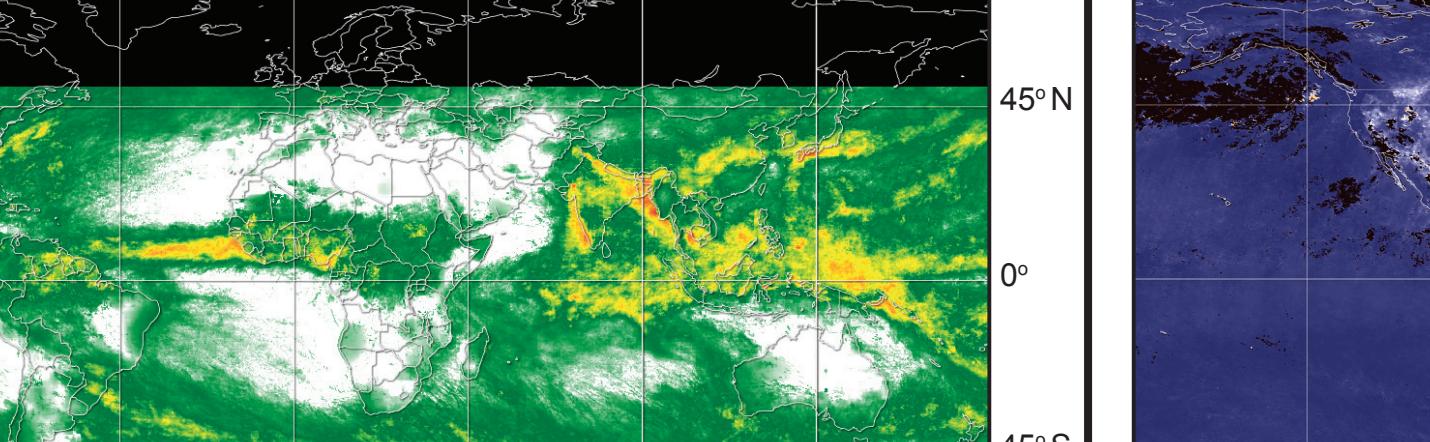
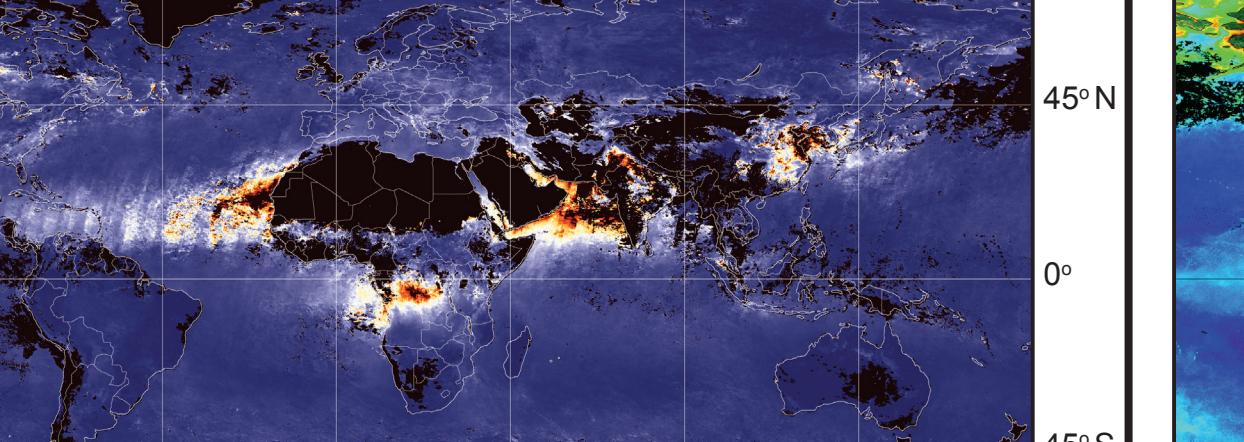
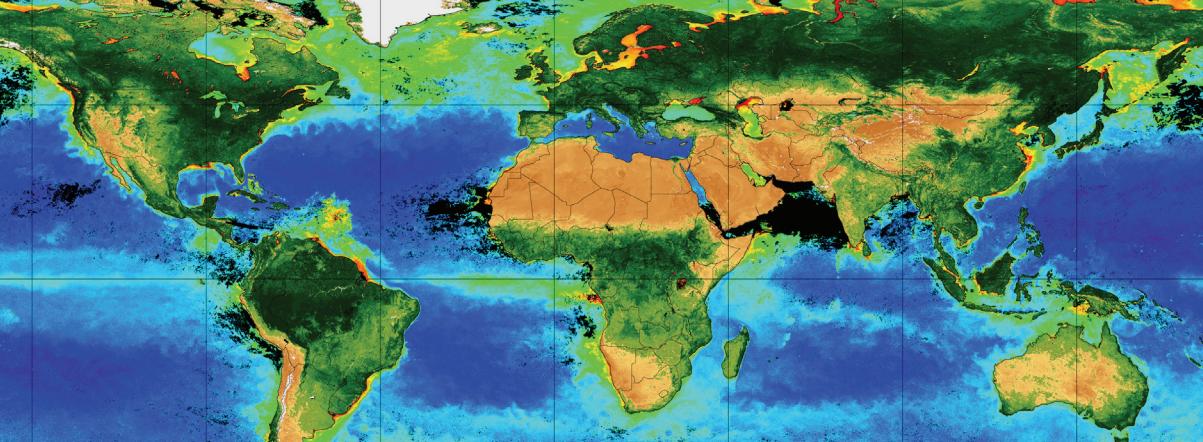
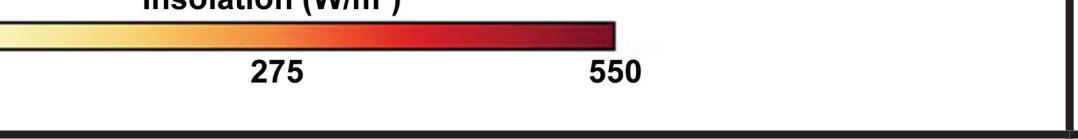
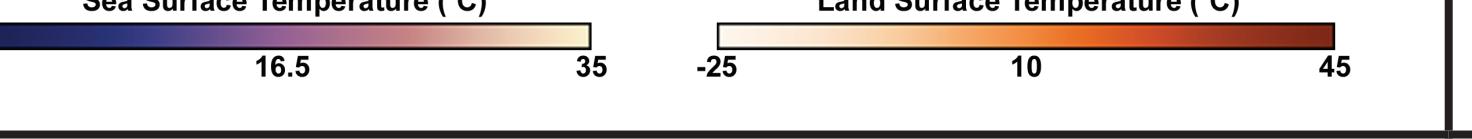
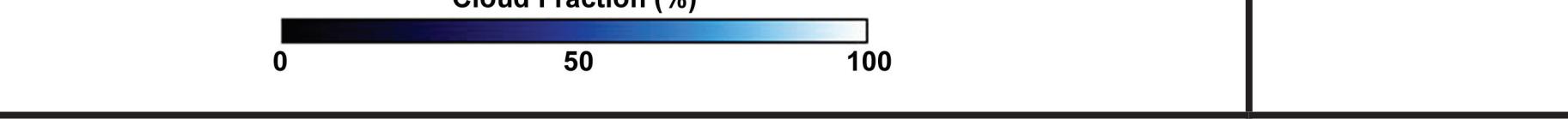
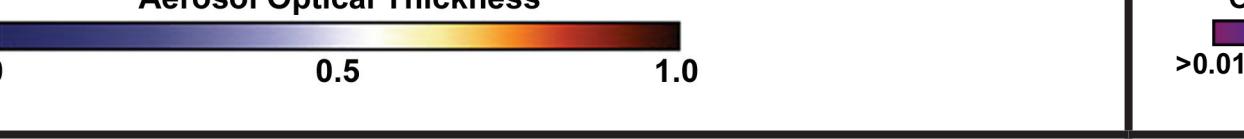
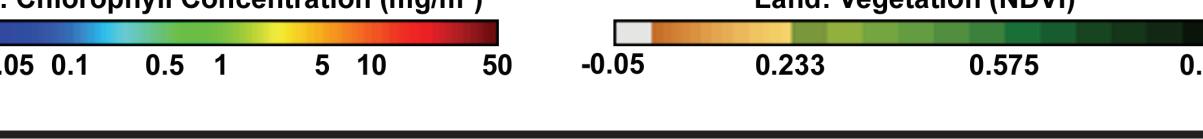
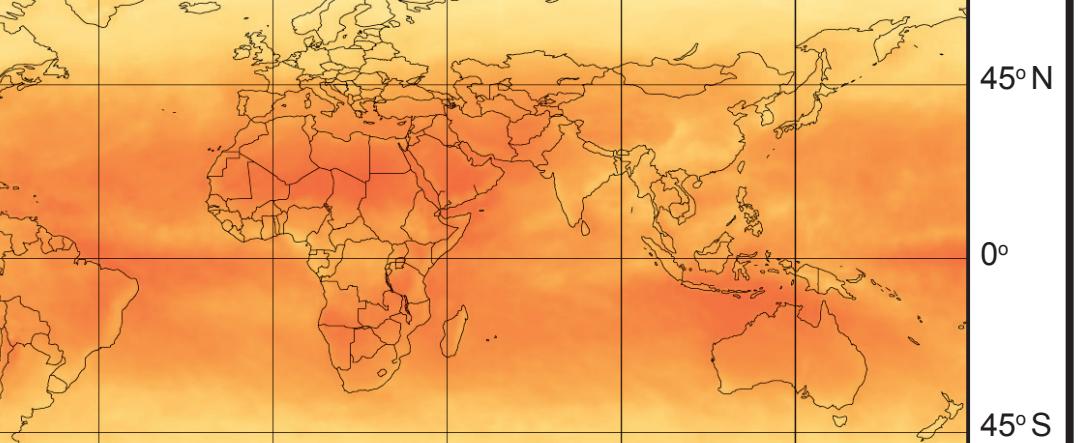
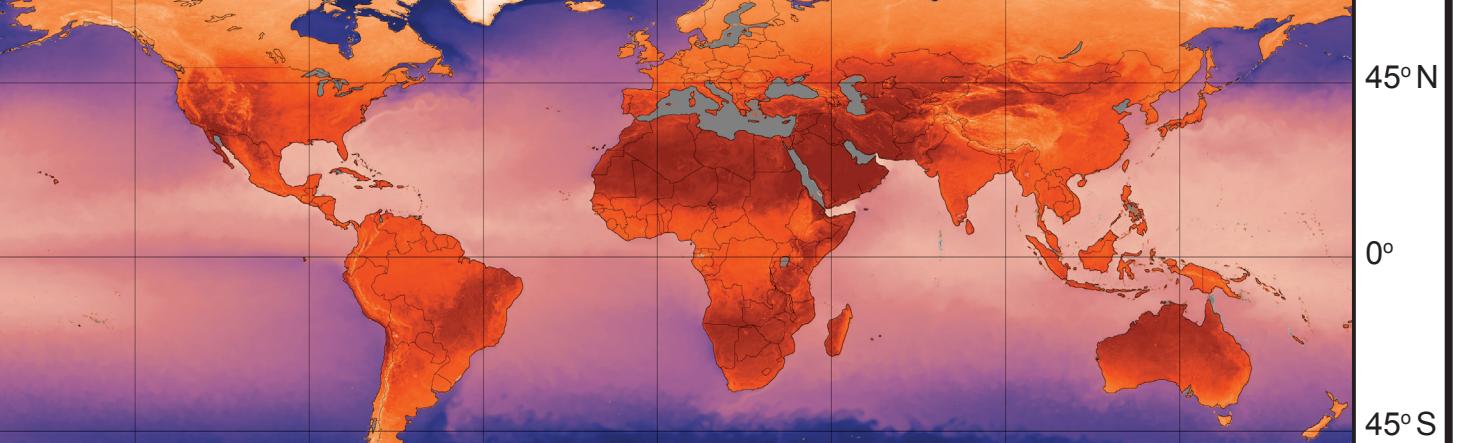
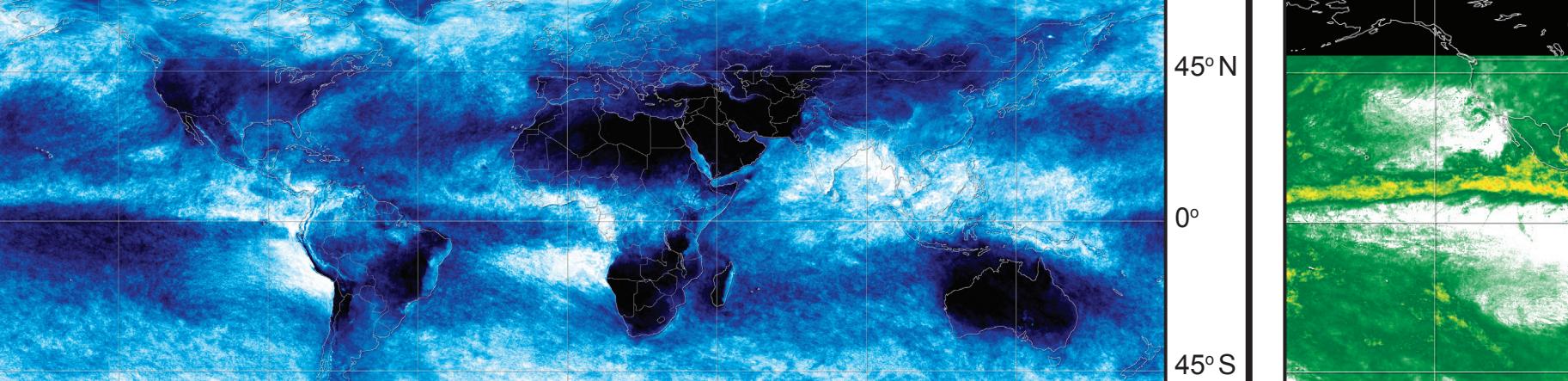
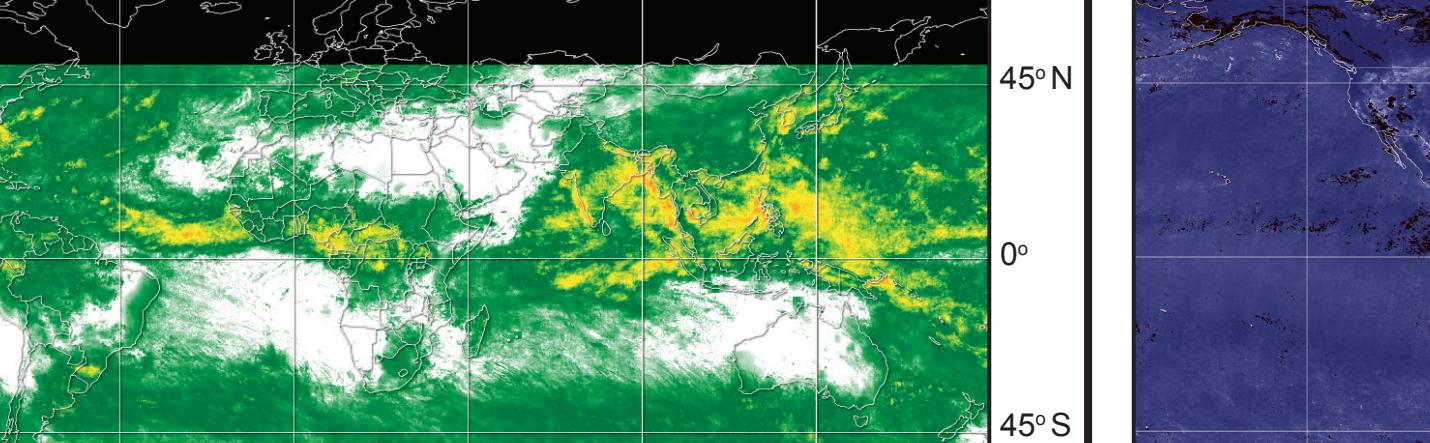
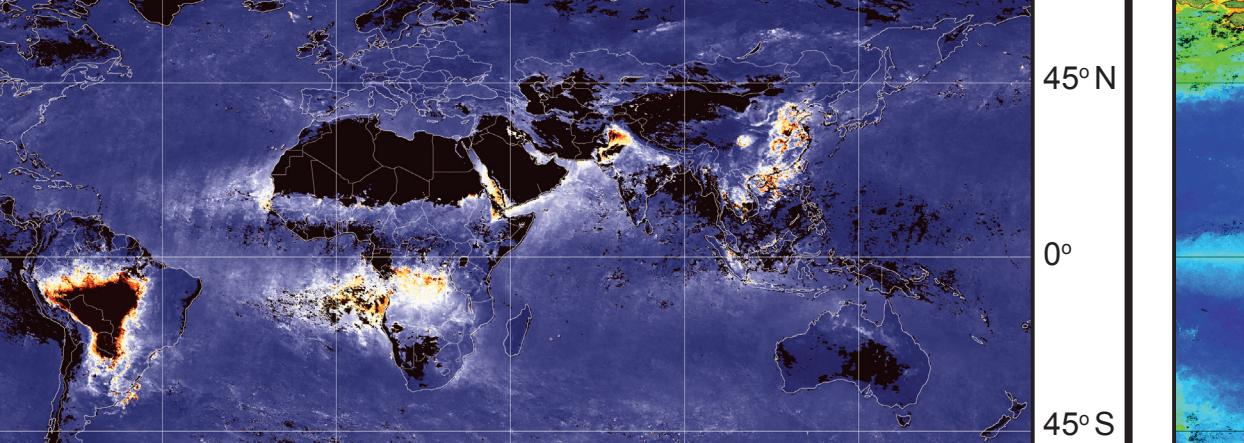
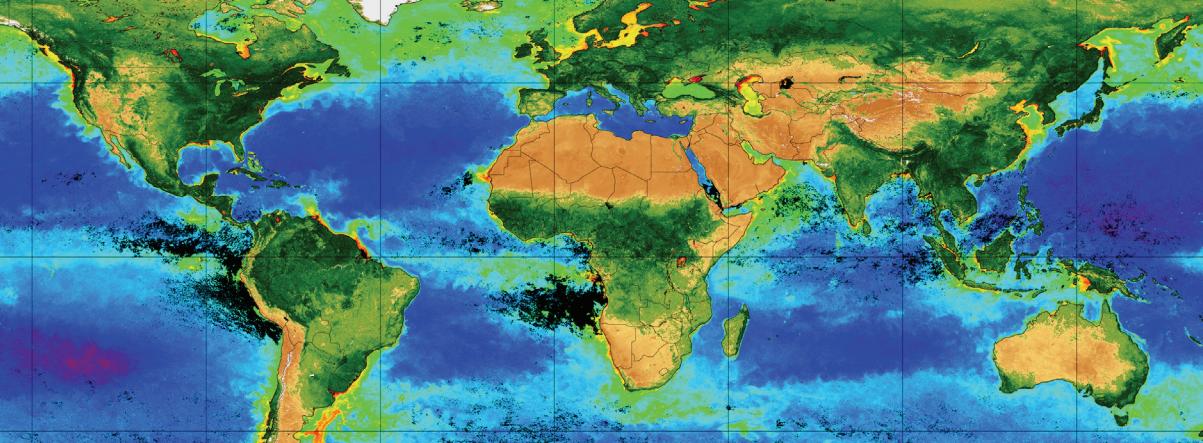
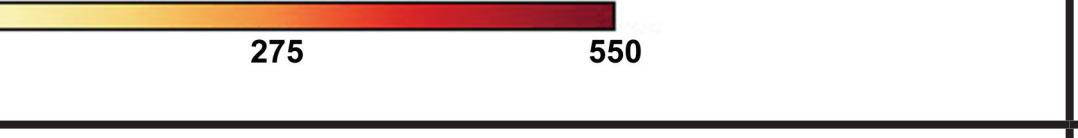
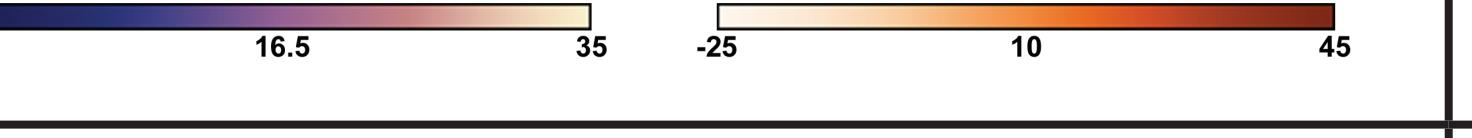
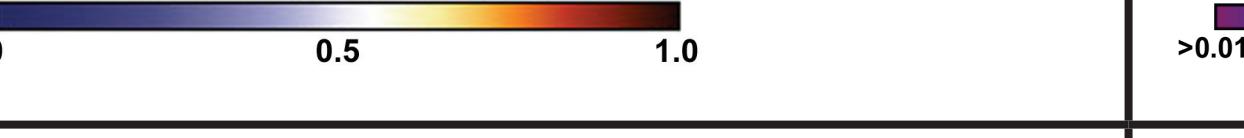
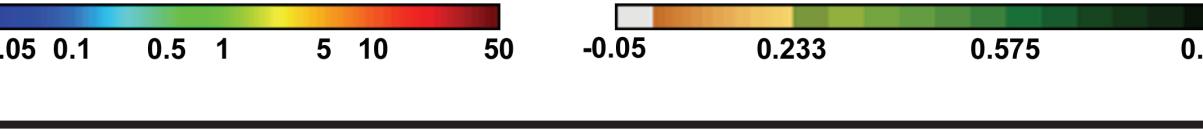
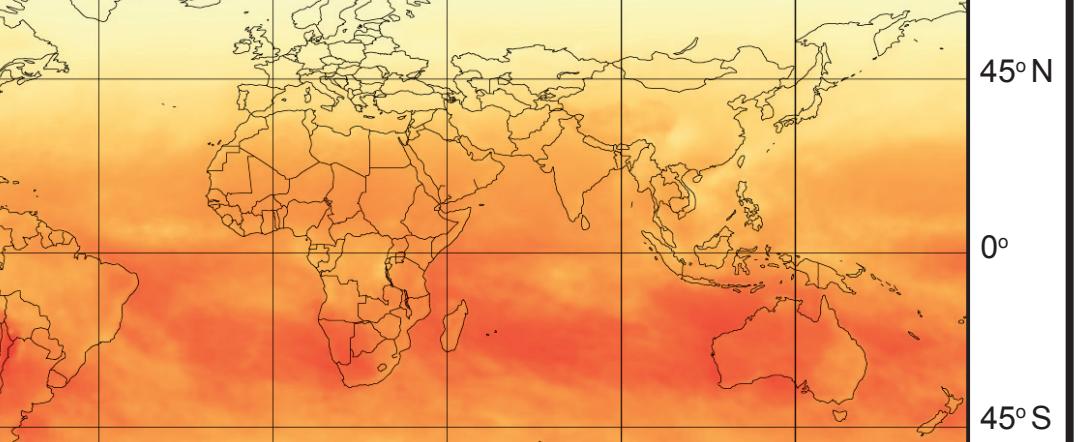
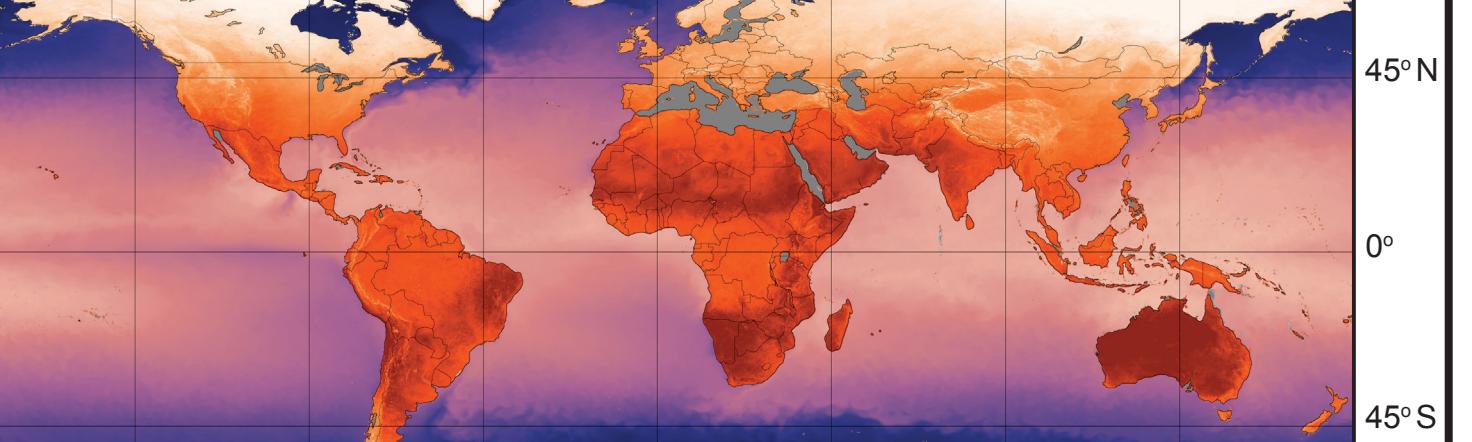
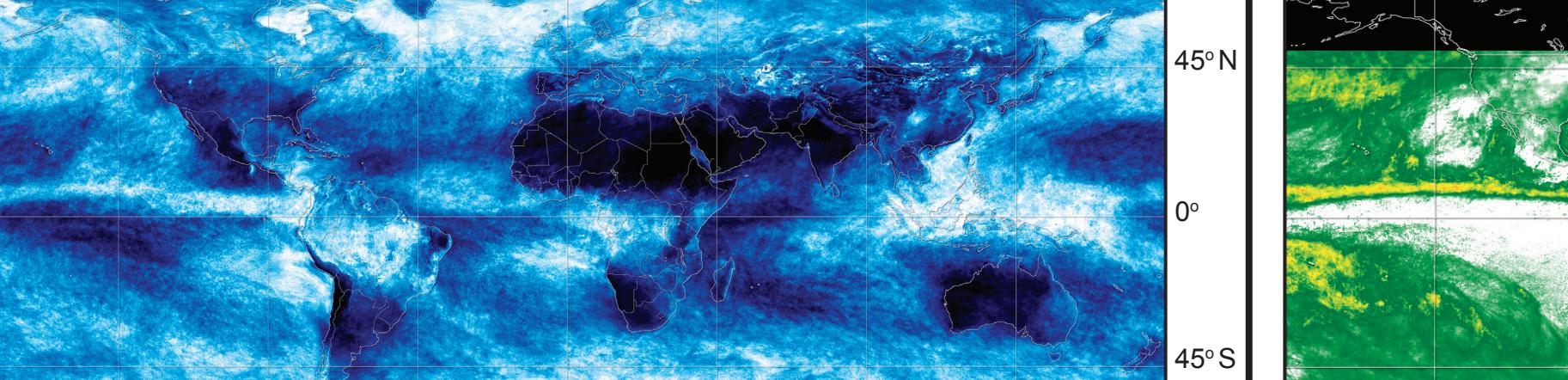
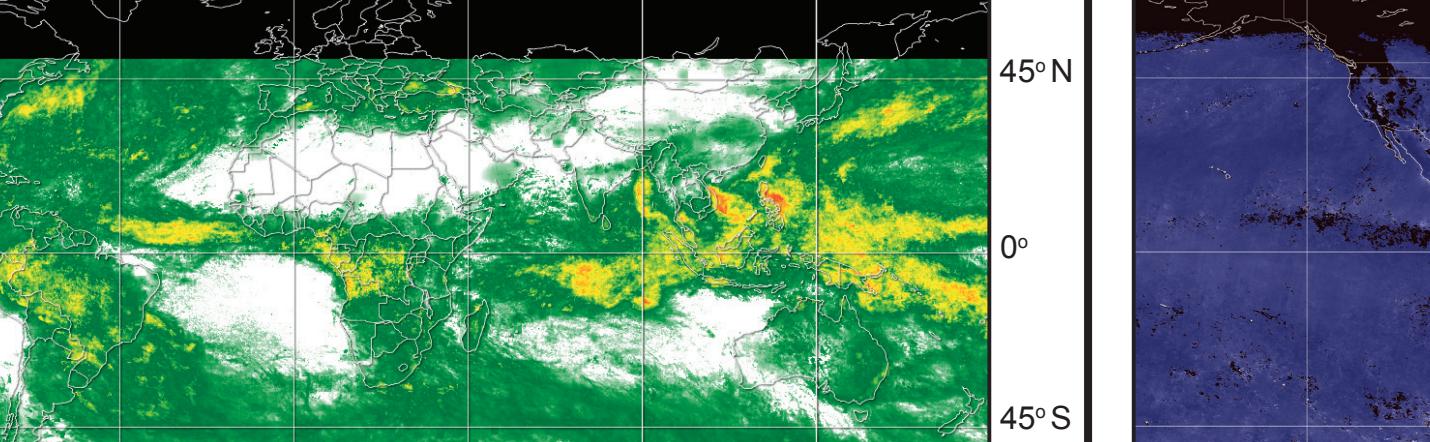
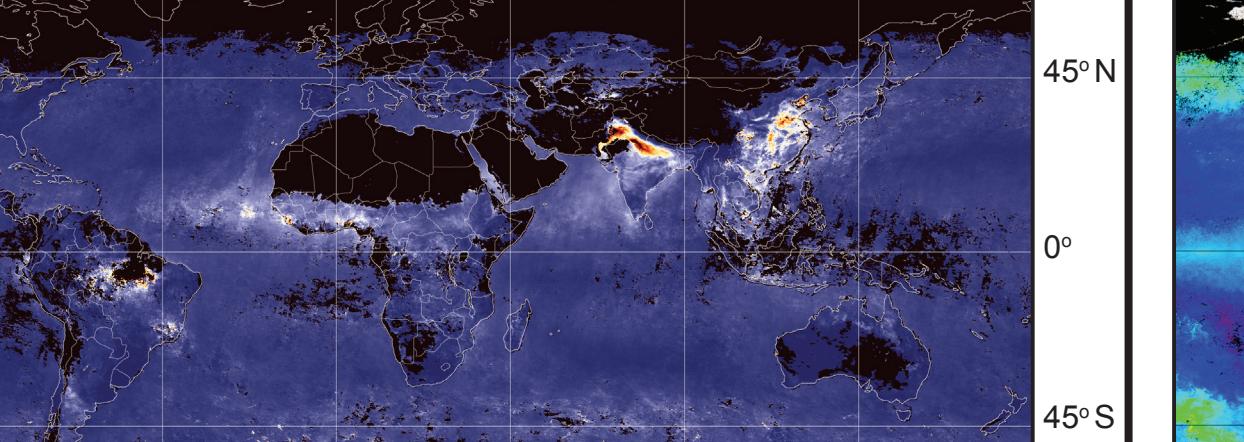
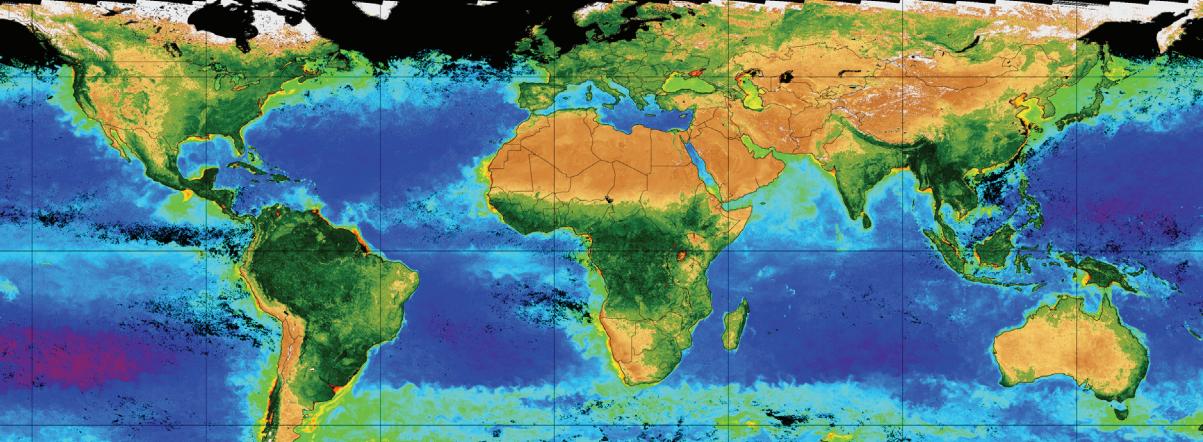




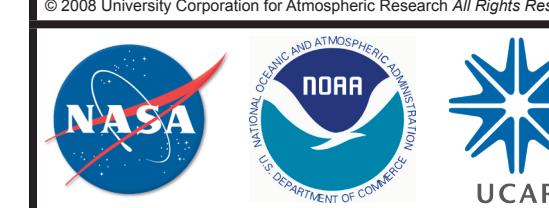
GLOBE Earth System Poster

Exploring connections in year 2007



	Insolation	Surface Temperature	Cloud Fraction	Precipitation	Aerosols	Biosphere
January						
	Insolation: January 2007	Surface Temperature: January 2007	Cloud Fraction: January 2007	Precipitation: January 2007	Aerosols: January 2007	Biosphere: January 2007
						
March						
	Insolation: March 2007	Surface Temperature: March 2007	Cloud Fraction: March 2007	Precipitation: March 2007	Aerosols: March 2007	Biosphere: March 2007
						
May						
	Insolation: May 2007	Surface Temperature: May 2007	Cloud Fraction: May 2007	Precipitation: May 2007	Aerosols: May 2007	Biosphere: May 2007
						
July						
	Insolation: July 2007	Surface Temperature: July 2007	Cloud Fraction: July 2007	Precipitation: July 2007	Aerosols: July 2007	Biosphere: July 2007
						
September						
	Insolation: September 2007	Surface Temperature: September 2007	Cloud Fraction: September 2007	Precipitation: September 2007	Aerosols: September 2007	Biosphere: September 2007
						
November						
	Insolation: November 2007	Surface Temperature: November 2007	Cloud Fraction: November 2007	Precipitation: November 2007	Aerosols: November 2007	Biosphere: November 2007
						

For more information about the study, please contact Dr. Michael J. Hwang at (319) 356-4000 or email at mhwang@uiowa.edu.



0 275 550 -2 16.5 35

Insolation is the rate of incoming sunlight reaching the Earth's surface. These images are derived from measurements of radiant energy escaping the top of Earth's atmosphere by the CERES instrument aboard NASA's Terra and Aqua satellites.

NASA's Terra and Aqua satellites.
Credit and contact information:
LST images by R. Stockli, NEO Team, using data provided by MODIS Land Science Team; SST im-

Imagery by J. Allen, NEO Team, based on FLASHFlux data produced using CERES observations combined with MODIS measurements. Data provided by the FLASHFlux team, NASA Langley Research Center. MODIS: Moderate Resolution Imaging Spectroradiometer (<http://modis.gsfc.nasa.gov>)
FLASHFlux: Fast Longwave And Shortwave Radiative Fluxes (<http://flashflux.larc.nasa.gov>)
CERES: Clouds and Earth's Radiant Energy System (<http://ceres.ornl.gov/ceres/>)
MODIS: Moderate Resolution Imaging Spectroradiometer provides higher spatial resolution, but can't see through clouds.
AMSR-E: Advanced Microwave Radiometer for EOS provides microwave ability to see through clouds.
TMI: TRMM Microwave Imager provides a seamless image (<http://trmm.gsfc.nasa.gov>)
RemSS: Remote Sensing System (<http://www.remss.com>)

CERES: Clouds and Earth's Radiant Energy System (<http://science.larc.nasa.gov/ceres>)
RemSS: Remote Sensing Systems (www.remss.com)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)

-25 10 45 0 50 100 1.0 10 100

Cloud fraction is measured using MODIS aboard NASA's Terra and Aqua satellites. Cloud fraction is the portion of Earth's surface covered by cloud relative to the portion of Earth not covered by cloud.

Credit and contact information:
Images by J. Allen, NEO Team, using SST data from AMSR-E, courtesy Dr. C. Gentemann, RemSS.
Credit and contact information:
Images by R. Stockli, NEO Team, using data provided by the MODIS Atmosphere Science Team.
Credit and contact information:
TRMM images provided by NASA Goddard Earth Sciences DISC, based on data from NASA and the Japan

cannot measure through clouds (<http://modis.gsfc.nasa.gov>)
nd cover and combines data from AMSR-E, MODIS, and TMI (www.ghcc.msfc.nasa.gov/AMSR)

MODIS: Moderate Resolution Imaging Spectroradiometer (<http://modis.gsfc.nasa.gov>)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)

TRMM: Tropical Rainfall Monitoring Mission (<http://trmm.gsfc.nasa.gov>)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)

200 2000 0 0.5 1.0 >0.01 0.05 0.1 0.5 1 5 10 50 -0

Aerosol Optical Thickness (AOT) is measured by MODIS aboard NASA's Terra satellite. Aerosols data includes optical thickness and size distribution of aerosols over most of the globe on a daily basis.

Index maps were produced using data collected by the Moderate Resolution Imaging Spectroradiometer (MODIS) on the Terra satellite. The MODIS Atmosphere Science Team provided the data used to calculate the aerosol optical depth. The aerosol optical depth was converted to the aerosol index using a linear regression equation. The aerosol index maps were produced by the National Oceanic and Atmospheric Administration (NOAA). The aerosol index maps were produced using data collected by the Moderate Resolution Imaging Spectroradiometer (MODIS) on the Terra satellite. The MODIS Atmosphere Science Team provided the data used to calculate the aerosol optical depth. The aerosol optical depth was converted to the aerosol index using a linear regression equation. The aerosol index maps were produced by the National Oceanic and Atmospheric Administration (NOAA).

MODIS: Moderate Resolution Imaging Spectroradiometer (<http://modis.gsfc.nasa.gov>)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)
Chlorophyll Concentration images by OceanColor Web, G. Feldman and N. Kuring; NDVI images by R. Stockli
MODIS: Moderate Resolution Imaging Spectroradiometer (<http://modis.gsfc.nasa.gov>)
NEO: NASA Earth Observations: (<http://neo.sci.gsfc.nasa.gov>)

0.05 0.233 0.575 0.912

via satellite, measures chlorophyll a daily over the entire planet. NDVI (Normalized Difference Vegetation Index) is calculated from the visible wavelengths.

DIS) aboard NASA's Terra satellite.

i, NEO Team, using data provided by the MODIS Atmosphere Science Team.