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Aerosol and CO online lab
Questions that were with the lab
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Where in the world do you see the highest values?

-Central America along the coasts, west of the Sahara, or west of northern Africa, and in China and India.

What areas have the lowest values?

-South America, mostly in Brazil is almost completely blank.

What do you know about those areas?

-All of the areas that have reported a large concentration of Aerosols are developing places that probably use fire from logs and branches for their main source of energy. Brazil in the places with low concentrations is also where the rainforests are, so where there is little human activity.

Why do you think these areas have high or low values?

-The fires contribute a lot to the Aerosol concentrations along with a lot of the sand blowing into the Atlantic Ocean and into the air from the Sahara.

What are aerosols? What are they composed of?

-Aerosols are tiny solid and liquid particles suspended in the atmosphere. Some examples of aerosols are windblown dust, sea salts, volcanic ash, smoke from fires, and pollution from factories.

What are the major sources of aerosols?

-windblown dust, sea salts, volcanic ash, smoke from fires and pollution from factories.

Are aerosols evenly distributed throughout the atmosphere? If not, why not?

-No they are not, because aerosols are more concentrated in regions where they are released more often. This was proved by the images we already looked at; The places that used the most firewood and fires for energy has generally the higher level of aerosols.

Why is it important for scientists and policy makers to understand the role of particulates in the atmosphere?

-Particles are important to scientists because they affect climate change, weather, and people's health. They affect the climate by scattering light back into space and cooling the surface. They also can help form clouds by giving water vapor something to cling on to.

What NASA instrument (sensor) gathers information on aerosols? What does the sensor measure in the atmosphere to determine the amount of aerosols?

-Moderate Resolution Imaging Spectroradiometer (MODIS) is used to monitor aerosol thickness and size distribution of the ambient (undisturbed) aerosol over most of the globe.

ImageJ questions

What month shows the highest aerosol concentrations?

-It all depends where you're looking, but in general May, June, and July had the highest levels of aerosol thickness.

What month shows the lowest aerosol concentrations?

-The winter months seemed to have lower levels of aerosol thickness in general, so December and January were the lowest.

Does your answer depend on where you are looking? Why might one area have its maximum aerosol concentrations in the spring, while another has its maximum aerosol concentrations in the fall?

-It depends where you are looking because of the different hemispheres: when it is summer on one, it is winter on another, so the inhabitants' actions will generally be opposite at the same time of year.

After I combined the two different data groups (of pictures), I was shocked by how extremely similar they were. When the CO levels in an area rose, the aerosol levels were also reported as higher, and vice versa.