

A New Global Greenhouse Gas Observation Initiative

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Earth Networks operates the largest surface weather observing and total lightning detection networks in the world and has recently embarked on a new major initiative to deploy a global system of Greenhouse Gas (GHG) observation instruments. Earth Networks will use gas calibration standards from the NOAA that insure compatibility with the World Meteorological Organization scales for GHGs.

The initiative involves close collaboration with leading climate scientists and organizations including Scripps Institute of Oceanography, NOAA and National Institute of Standards and Technology. In addition, data from the network will be utilized for advanced inverse atmospheric modeling applications and the development of finer scale total carbon footprints and emissions estimates for various regions across the globe. This talk will discuss the emerging global monitoring capability of Earth Networks and outline its associated plans to help advance both scientific understanding and public awareness of atmospheric GHG concentrations.

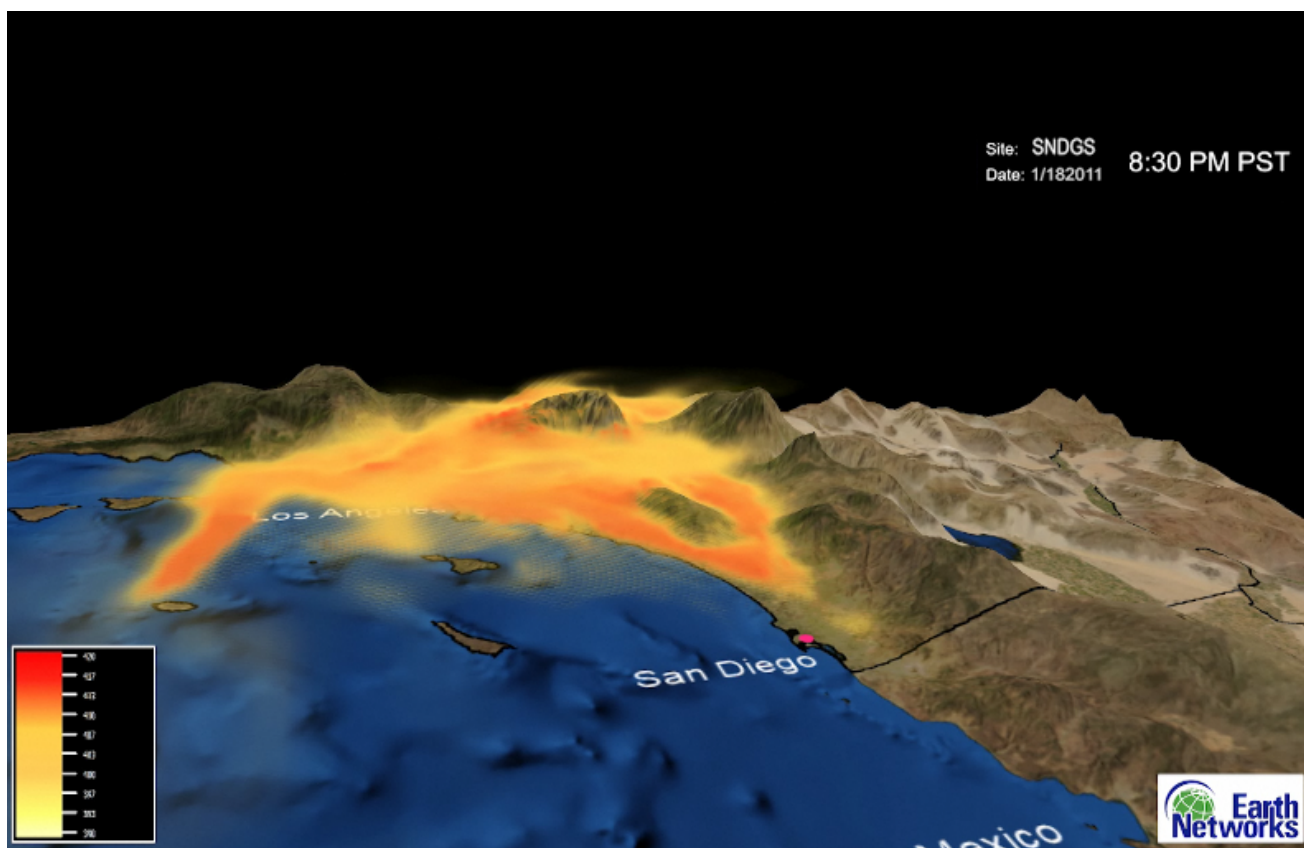


Figure 1. Example of an Earth Networks 3D rendering from its GHG portal showing the concentration levels of carbon dioxide and its motion over the area during one day over San Diego. This animated visualization is based on operational forecast, and shows vertical distribution of CO₂ in the air, which is affected by the weather and depends on topography of a particular region. The colors represent levels of CO₂ – measured in parts per million units. The animation step is 30 minutes over a period of 24 hours.