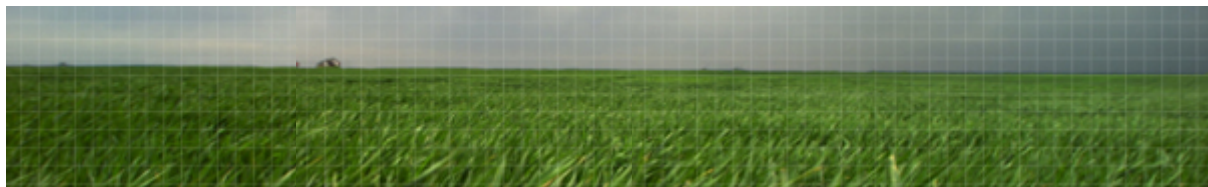


Lawrence Berkeley National Laboratory and the CLASIC Experiment



For CLASIC, Berkeley Lab is making a vast array of carbon concentration, isotope, and flux measurements in the Southern Great Plains. The team will be conducting measurements from crop fields, a tall tower, and two aircraft, in one of the most intensive carbon regional carbon studies in the world. They will use the data to improve the ability to monitor and predict fluxes of carbon dioxide (a greenhouse gas). Fossil fuel refining and combustion are the big sources of carbon dioxide, and agriculture in the region can act as either a source or sink of carbon dioxide. This research is supported by the ARM Climate Research Facility.

Research Team

Berkeley's Lab's participation in the CLASIC experiment is conducted under the leadership of Dr. Margaret Torn, a biogeochemist within the lab's Earth Sciences Division. Dr. Torn is an authority on carbon and nutrient cycling in terrestrial ecosystems and climate change. Working with Torn on this project from Berkeley Lab are Dr.'s Marc Fisher, Bill Riley, and Sebastien Biraud.

About the Lab

Lawrence Berkeley National Laboratory (Berkeley Lab) is a U.S. Department of Energy (DOE) national laboratory that has been a leader in science and engineering research for more than 75 years. Located on a 200 acre site in the hills above the Berkeley campus of the University of California (UC), Berkeley Lab is managed for DOE by UC. It operates with an annual budget of nearly \$600 million and a staff of about 4,000. It conducts unclassified research across a wide range of scientific disciplines with key efforts in fundamental studies of the universe; quantitative biology; nanoscience; new energy systems and environmental solutions; and integrated computing as a tool for discovery. It is organized into 17 scientific divisions and hosts six DOE national user facilities. Berkeley Lab's proud heritage encompasses 11 Nobel Laureates, including its founder and namesake, Ernest O. Lawrence, winner of the 1939 Nobel Prize in physics for invention of the cyclotron. Its current director, Steven Chu, shared the 1997 Nobel Prize in physics for his work in cooling and trapping atoms by using laser light.

Berkeley Lab's participation in the CLASIC experiment is carried out through its Earth Sciences Division (ESD), which has a staff of more than 200 scientists performing award-winning research in hydrogeology and reservoir engineering, geophysics and geomechanics, geochemistry, microbial ecology, and environmental engineering. Major program areas include climate change and carbon management, energy and environmental technologies, nuclear waste storage, and environmental remediation.

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