Soil Carbon Sequestration in California Grasslands

CAMS scientists are measuring the carbon isotopic composition of dissolved organic carbon (DOC), bacterial biomass, and soil organic matter (SOM) in annual grasslands in a sequence of California coastal terraces to identify the important transport pathways and carbon cycle rates. The project involves collecting DOC in quartz collection devices (lysimeters) installed at different soil depths. The water is pumped from them bi-weekly and after major storm events and analyzed using ^{14}C and ^{13}C-NMR. The results will be integrated with those of collaborators at U.S. Geological Survey, Lawrence Berkeley National Lab, UC Santa Barbara and UC Santa Curz into a soil carbon cycling model.