Three-dimensional representation of the latitudinal distribution of the carbon isotopic composition of atmospheric carbon dioxide in the marine boundary layer. The measurements of stable isotope ratios were made at the University of Colorado INSTAAR using air samples provided by the Carbon Cycle cooperative air sampling network. The surface represents data smoothed in time and latitude. The isotope data are expressed as deviations of the carbon-13/carbon-12 ratio in carbon dioxide from the VPDB-CO2 standard, in per mil (parts per thousand). Contact: Dr. Jim White, CU/INSTAAR, Boulder, Colorado; (303) 492-5494, James.white@colorado.edu, http://www.esrl.noaa.gov/gmd/ccgg/.