Geophysical Research Abstracts, Vol. 8, 03043, 2006

SRef-ID: 1607-7962/gra/EGU06-A-03043 © European Geosciences Union 2006



Carbon America – An in situ North American carbon cycle observing system

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Carbon America is an element of the US National Oceanic and Atmospheric Administration (NOAA) Carbon Cycle Atmospheric Observing System and is focused on North America in order to determine carbon dioxide emission (sources) and uptake (sinks) in and around the U.S. The observing system consists of automated gas sampling systems flown on small chartered aircraft and instrumentation that measures continuously from several heights on very tall (500 m) communication towers. This program is a key element of the interagency North American Carbon Program (NACP), involving research by NOAA and six other US agencies. NACP is aimed at understanding the carbon balance of North America and determining regional geographic sources and sinks of carbon dioxide, methane and carbon monoxide and how they change. Carbon America's ultimate goal is to establish 36 vertical profiling sites, mainly in the U.S. The current status of the network will be discussed.