A.5 CARBON CYCLE SCIENCE

NOTICE: The Carbon Cycle Science program will not solicit proposals in ROSES-2015. All funds currently available for a dedicated carbon cycle science opportunity are committed to the support of awards selected through the 2013 Carbon Cycle Science solicitation. These carbon cycle science funds will be competed again in ROSES-2016. NASA expects to continue to solicit some carbon cycle research through its core research and analysis programs, in particular, the Terrestrial Ecology, Ocean Biology and Biogeochemistry, Land Cover and Land Use Change, and Atmospheric Composition programs. Interested researchers are encouraged to consult these other program elements for potential funding opportunities.

NASA’s Carbon Cycle Science research opportunity is offered every three years and usually in partnership with one or more U.S. Government agencies, most recently with the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), Agriculture and Food Research Initiative Competitive Grants Program (AFRI); the U.S. Department of Energy (DOE) Terrestrial Ecosystem Science Program; and the Atmospheric Chemistry, Carbon Cycle, and Climate (AC4) Program within the National Oceanic and Atmospheric Administration’s (NOAA’s) Climate Program Office. Proposals were sought to improve the understanding of changes in the distribution and cycling of carbon among the active land, ocean, and atmospheric reservoirs and how that understanding can be used to establish a scientific foundation for societal responses to global environmental change.

The goals of the NASA Earth Science Program for Carbon Cycle Science are to improve the understanding of the global carbon cycle and to quantify changes in atmospheric CO₂ and CH₄ concentrations, as well as terrestrial and aquatic carbon storage in response to fossil fuel combustion, land use and land cover change, and other human activities and natural events. NASA carbon cycle research encompasses multiple temporal and spatial scales and addresses atmospheric, terrestrial, and aquatic carbon reservoirs, their coupling within the global carbon cycle, and interactions with climate and other aspects of the Earth system. A focus on observations from space pervades carbon cycle research by NASA and is a basis for partnerships with other U.S. Government agencies and institutions. NASA carbon cycle research contributes toward the goals of major USGCRP activities, including the Carbon Cycle Science Program’s U.S. North American Carbon Program (NACP) and the Ocean Carbon and Climate Change Program (OCCC) (http://www.globalchange.gov/, https://www.carboncyclescience.us, http://www.nacarbon.org/naczp/, and http://www.us-ocb.org/about/projects.html). NASA carbon cycle research also contributes toward the goals of the National Ocean Council’s National Ocean Policy planning documents (http://www.whitehouse.gov/administration/eop/oceans/policy).

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