



Postdoctoral Researcher - Arctic Carbon
Falmouth, Massachusetts or Remote
[Link to Apply](#)

Mission:

Woodwell Climate Research Center (Woodwell) conducts science for solutions at the nexus of climate, people, and nature. We partner with leaders and communities for just meaningful impact to address the climate crisis.

Summary/Objective:

Join Woodwell's NASA Arctic Boreal Vulnerability Experiment (ABoVE) team as a Postdoctoral Researcher to support a modeling project that investigates the impacts of changing ecosystem greenhouse gas (GHG) emissions and albedo on atmosphere radiative forcing within the Arctic-boreal zone. The Postdoctoral Researcher will work directly as a member of the ABoVE science community to assist with an ongoing multi-model comparison of bottom-up CO₂ and CH₄ flux budget estimates for the Arctic-boreal domain. The Postdoctoral Researcher will also lead the radiative forcing component of this study, using the compiled bottom-up GHG budgets, in addition to gridded fire emission products and gridded satellite-based albedo products as drivers. This position requires a background in atmospheric modeling, experience with computer coding and high-performance computing, and the ability to work independently.

Responsibilities:

Work with and analyze gridded GHG flux data provided from multiple bottom-up machine learning and process-based models. Compare the bottom-up flux data with GHG estimates provided through atmospheric inversions.

- Work with additional gridded datasets of satellite-informed wildfire emissions and albedo.
- Prepare bottom-up carbon flux data for inclusion into atmosphere radiative forcing models (i.e., derive input atmosphere GHG concentrations from flux products).
- Work with atmosphere radiative transfer model to identify changes in radiative forcing due to spatiotemporal changes in terrestrial and aquatic GHG flux and albedo.
- Execute a variety of complex research procedures with little supervision.
- Schedule own work and lead project implementation with minimal supervision.
- Assist in project planning and contribute to data analysis, and interpretation.
- Lead and assist with manuscript preparation.
- Serve as a member of the NASA ABoVE science team; participate in virtual working group meetings; attend annual ABoVE science team meeting.
- Present research at annual American Geophysical Union (AGU) Fall meetings.
- Attend Woodwell's weekly (virtual) Arctic group lab meeting.

Required Qualifications and Experience

Ph.D. (or while obtaining the Ph.D.) in atmospheric science, applied mathematics, statistics, or earth system sciences.

- Scientific modeling and working with various coding languages (e.g., Fortran, C++, Python), 2+ years of experience.
- Working with atmosphere radiative transfer models.
- Multi-dimensional process model output, advanced statistical techniques, and manipulating large data sets.
- Familiarity with Linux/Unix systems and/or supercomputing systems.
- Excellent written and oral communication skills.
- Ability to work independently and in a highly collaborative environment.

Preferred Qualifications:

- Working with atmosphere transport and/or inverse modeling is a plus.
- Knowledge of regional and global carbon cycles and experience working with atmosphere GHG data (CO₂ and CH₄).
- Interest in climate change impacts on the northern high latitude Arctic-boreal region (including permafrost region).
- Ability to meet requirements for access to NASA computing systems.

Physical Requirements:

- Ability to tolerate sustained periods of walking, standing, sitting
- Ability to lift 25 pounds
- Ability to communicate
- Ability to kneel, bend, and carry items
- Ability to use phone and computers
- Repetitive movements
- Air, train, vehicle travel to attend meetings/event

Application review will be ongoing.

Desired Start Date: February 5, 2024 (some flexibility).

Fixed-term: February 6, 2026, or two years after start date.

Classification and Compensation: This is a full-time, salaried, exempt position, the annual salary range is \$69,000.00 to \$75,000.00 dependent on qualifications/experience. Woodwell offers a generous benefits package and work life balance.

Location: Falmouth, Massachusetts or remote.

Application Instructions: To apply, please send your cover letter addressing your experience and qualifications in relation to the responsibilities of this position, curriculum vitae, and contact information for three references as **a single PDF** to our career's portal. Incomplete applications will not be reviewed. Please type PDAC on all correspondence.

Please visit [Woodwell's website](#) to learn more about Woodwell's work.

Located on a 10-acre campus near the village of Woods Hole, the Woodwell Climate Research Center (Woodwell) is a private, non-profit research center. Woodwell is a leading source of climate science that drives the urgent action needed to solve climate change. Woodwell has 100+ staff members and is excited to welcome new employees to this work.

Woodwell is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, mental, or physical disability, age, sexual orientation, gender identity, national origin, familial status, veteran status, or genetic information. Woodwell is committed to providing access, equal opportunity, and reasonable accommodation for all individuals in employment practices, services, programs, and activities.

Diversity, Equity and Inclusion at Woodwell

WE NEED ALL VOICES IN THE FIGHT AGAINST CLIMATE CHANGE

Climate change is the greatest challenge of our lifetimes. Woodwell Climate Research Center (Woodwell) understands that the climate crisis—from causes to consequences—is inextricably linked with persistent social injustice. Effectively addressing either requires addressing both. The climate crisis demands that we bring to bear all of the knowledge, expertise, innovation, and creativity that we can collectively muster, and those who have been marginalized and disproportionately impacted must be heard.

The work Woodwell does—the questions we ask, the ways we seek answers, and the strategies we put forward—is stronger when shaped by a diversity of knowledge, perspectives, and experiences. We strive to welcome, respect, and amplify differing voices. We value individuals as they are, with all their differences in race, age, ethnicity, gender identity, sexual orientation, religious beliefs, language, and mental and physical abilities.

Woodwell acknowledges that our organization, and the scientific community more broadly, have a long way to go in living up to these ideals. We approach the work of improving our organization with the same ambition and commitment to systemic change that we bring to addressing climate change.

We will inevitably make mistakes, but we will continue to listen, learn, and do this critical work. We understand that this work requires an ongoing commitment from each and every one of us. We are actively engaged in building and sustaining an equitable and inclusive culture within our organization, and in fostering greater diversity in climate science.