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**ASTROPHYSICIST JACKIE FAHERTY AWARDED
NATIONAL SCIENCE FOUNDATION CAREER GRANT**

**PRESTIGIOUS GRANT FUNDS DEVELOPMENT OF
MOST COMPLETE MAP OF OUR SOLAR NEIGHBORHOOD**



American Museum of Natural History astronomer Jackie Faherty has been awarded a prestigious five-year National Science Foundation (NSF) Faculty Early Career Development (CAREER) grant to develop the most complete map ever generated of our solar neighborhood, part of an effort to explore the fundamental question of the origin of stars, planets, and brown dwarfs. NSF’s CAREER awards support junior faculty who exemplify the role of teacher-scholars through research, education, and the integration of education and research within the context of the mission of their organizations.

“There are certain times in our history when humans can just look around and make revolutionary discoveries about our place in the universe,” said Faherty, who is a senior research scientist and senior education manager at the Museum. “With the recent arrival of

several astronomy mapping missions, we are in one of those rare moments. The area around our Sun is ripe for exploration by just looking for objects that move together.”

Within about 500 light years from the Sun, there are large-, small-, and medium-sized families of stars, planets, and brown dwarfs—celestial objects more massive than planets but lighter than stars—that are moving through the galaxy together. Some are tightly bound, some loosely bound, some breaking apart, and some are just newly formed. The goal of Faherty’s project is to determine how these families form and evolve. In so doing, this project will address fundamental questions about where stars come from and how they arrive at their present state.

The scientific work will be integrated into an educational pipeline that includes developing planetarium presentations as well as videos that can be used both on social media and course integration, all with the assistance of New York City educators. Cinematic visuals of the solar neighborhood will be made with the [Open Space visualization software](#), which is supported by NASA and is being developed through a multi-institutional collaboration led by the Museum and Sweden’s Linköping University.

Faherty holds a unique position at the Museum as a member of both the Education and Astrophysics departments, which allows her to pursue scientific research while mentoring and advising education programs for students and the general public. Faherty leads research efforts to explore new structures in the Milky Way, including several projects with students in the Museum’s [Master of Arts in Teaching](#) program, and has provided awe-inspiring tours of the universe for thousands of Museum visitors onsite and online.

Faherty also co-founded the popular citizen science project [Backyard Worlds: Planet 9](#), which has engaged more than 150,000 individuals across the globe to search for previously missed objects lurking in neighboring interstellar space.

Faherty earned her Ph.D. from Stony Brook University in 2011, for which Museum curator Michael Shara was one of her advisors. A Fellow of the American Astronomical Society (AAS), she also is a recipient of the [Vera Rubin Early Career Prize](#), awarded in 2020 from AAS.

ABOUT THE AMERICAN MUSEUM OF NATURAL HISTORY (AMNH)

The American Museum of Natural History, founded in 1869, is one of the world’s preeminent scientific, educational, and cultural institutions. The Museum encompasses

more than 40 permanent exhibition halls and galleries for temporary exhibitions, the Rose Center for Earth and Space and the Hayden Planetarium, and the Richard Gilder Center for Science, Education, and Innovation, which opens in 2023. The Museum's scientists draw on a world-class permanent collection of more than 34 million specimens and artifacts, some of which are billions of years old, and on one of the largest natural history libraries in the world. Through its Richard Gilder Graduate School, the Museum grants the Ph.D. degree in Comparative Biology and the Master of Arts in Teaching (MAT) degree, the only such freestanding, degree-granting programs at any museum in the United States. The Museum's website, digital videos, and apps for mobile devices bring its collections, exhibitions, and educational programs to millions around the world. Visit amnh.org for more information.

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Image:

Jackie Faherty

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