

Dana Burton, *The George Washington University*

For “Tracing Harmful Contamination in NASA’s Search for Life on Mars”

The winner of the 2019 SHOT-NASA Fellowship is Dana Burton, PhD candidate in the George Washington University Anthropology Program. Burton was awarded this fellowship for her research project “*Tracing Harmful Contamination in NASA’s Search for Life on Mars*,” her dissertation analyzing contamination protocols for human and robotic space exploration. How has the concept of harmful contamination changed over time? What are the consequences of these successive definitions as research communities grapple with their understandings of life on and off Earth?

For her dissertation, Burton seeks to periodize how evolving definitions of life— and by extension, microbial contamination— informed social processes shaping the technologies and techniques for determining acceptable contamination protocols. Situating her work at the intersection of the history of science and technology, Burton will investigate scientific instruments and missions as they affect (and are affected by) lab practice, policy, and mission parameters ranging from the 1960s to present. Her project aims to contribute to literature investigating how the public, scientific, and policy communities each participate in frontier boundary-work, in particular addressing “who or what is allowed to be in outer space?” Burton will use her fellowship to research at NASA Headquarters and Center archives, the Library of Congress, the National Archives, and the National Academies of Sciences, Engineering, and Medicine. Intriguingly, she proposes extending her anthropological analysis to the social forces of archival and records management practices, asking if and how these professional activities, too, shape the transfer of information across time and society.