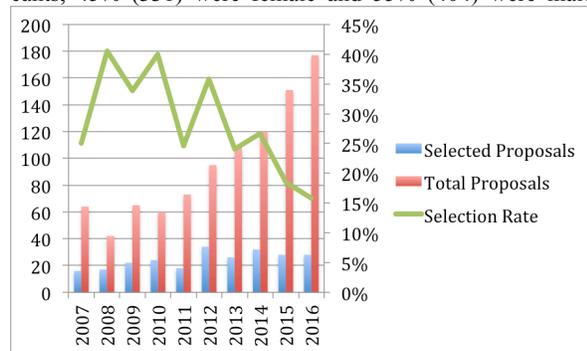


THE CAREER AND DEGREE COMPLETION OF NASA EARTH AND SPACE SCIENCE FELLOWSHIP PLANETARY SCIENCE RECIPIENTS. S.A. Byrne¹ and M. L. Thompson^{2, 1} Mount Holyoke College, 50 College Street, South Hadley MA 01075; sbyrne@mtholyoke.edu. ² ASRC Federal, 7000 Muirkirk Meadows Dr #100, Laurel, MD 20707; meagan.thompson@nasa.gov

Introduction: The objective of this study was to determine the effects of the NASA Earth and Space Science Fellowship (NESSF) in Planetary Science on the recipients' educational and career success compared to other applicants and the general STEM population. The goal of the NESSF award is to give the most promising students pursuing graduate research that pertains to NASA's mission a greater opportunity to focus on their research. Since 2007, the Planetary Science Research and Analysis program has received 891 proposals from 734 unique individuals. Of the total applicants, 45% (331) were female and 55% (404) were male.



Method: The applicants' names, institutions, gender and advisors were collected from the NSPIRES public website and NASA's internal data. The applicants' current positions were collected via internet searches and added to the dataset for analysis. Current positions were placed into the categories of tenure-track professor, non-tenure-track professor, postdoctoral researcher or fellow, scientists, other-in field of Ph.D. research, other-outside field of Ph.D. research, unemployed, and missing.

Results: Of the applicants whose proposals were selected, 37% came from 4 institutes: University of Arizona, 11%, University of Colorado, Boulder, 10.6%, California Institute of Technology 9%, Arizona State University 6.5%. For those whose proposals were not selected, the top four institution accounted for 25.7%: University of Colorado, Boulder 9.9%, University of Arizona 7.3%, Arizona State University 5%, California State University 3.5%. In comparison to the national averages in STEM fields (55% to 64%), both the selected and not selected NESSF applicants have a higher Ph.D. completion rate. A master's degree was the terminal degree for 7% (8) of selected applicants and 14% (23) of not selected applicants. However, the Ph.D. completion date could not be determined for 2% (2) of the selected applicants and 13% (22) of not selected applicant

s with proposal dates prior to 2016. The Ph.D. completion rate for selected applicants is 91% to 93%, and 73% to

86% for not selected applicants (lower percent includes missing data as incomplete Ph.D.).

A majority of applicants were still pursuing their terminal degree at the time of this study: 53% of applicants with selected proposals and 61% of applicants whose proposals were not selected. A total of 278 applicants completed their degree at the time of this study. Of the 111 individuals with selected proposals who completed their terminal degree, 6 (5%) went on to become NASA Postdoctoral Program fellows, 108 (92%) are working in the field related to the Ph.D. area of study, and 62 (53%) work for academic employers. For those whose proposals were not selected, 167 completed their terminal degree and 16 (9.6%) went on to become NASA Postdoctoral Program fellows, 126 (75%) are working in the field related to the Ph.D. area of study, 66 (40%) work for by academic employers.

NESSF Applicants with Completed Ph.D. Current Positions

	Selected	Not Selected
Tenure-Track Professor	18%	15%
Non-Tenure Track Professor	7%	6%
Postdoctoral Researcher/Fellow	38%	34%
Scientist	20%	31%
Other-in field	9%	6%
Other-outside field	5%	2%
Unemployed	1%	1%
Missing data	3%	6%

In the physical sciences, the rate of those seeking employment was 3.5% in 2010 according the NSF report by Milesi, Lance, and Milan (2014). For the NESSF planetary science applicants, 0.8% of those with selected applicants and 1.3% (missing data not included) of not selected applicants were actively seeking employment.

Summary: The NESSF in the planetary science field has met the goal of supporting the best and brightest students' research by increasing their chance of completing their Ph.D. However, after their degree completion, all applicants to the program appear to experience similar levels of career success.

References: [1] R. Sowell (2014) *Council of Graduate Schools*. (2008), [2] C. Milesi, L.A.Selfa , and L.M. Milan. (2014) *Info Brief* , *National Science Foundation*